## UNDERGRADUATE COURSE CATALOG <br> 2015-2016

SYRACUSE UNIVERSITY

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Welcome to Syracuse University's online course catalog. In this searchable resource you'll find detailed information about all of the schools, colleges, and hundreds of distinct degree programs offered by Syracuse University at every level, including descriptions of the faculty and related courses. You also will find descriptions of many special opportunities and entities that enhance academic life at Syracuse, such as study abroad programs, centers for interdisciplinary learning, and immersion opportunities across the U.S. and around the world.

Those of you already familiar with Syracuse University will find here the specifics that you seek, and we invite those not yet familiar with us to explore the full breadth and depth of our academic offerings. Whatever your level of familiarity, we're sure that as you learn more about Syracuse, you will find ample evidence of our institutional commitment to inspire, challenge, and energize students to strive for excellence always as they pursue their academic and professional goals.

The Syracuse University Undergraduate Course Catalog and Graduate Course Catalog are published online annually in July and are primarily intended for use by currently enrolled students, faculty, and staff. The catalogs provide an overview of the University's curriculum, academic programs, facilities, and educational resources. They also include University academic policies, rules, regulations, and procedures; information about degree and certificate programs, including degree requirements; a listing and description of courses; and faculty information. Links to other related information are also included.

The information concerning academic requirements, courses, and programs of study contained in the publication does not constitute an irrevocable contract between the student and the University. The University reserves the right to change, discontinue, or add academic requirements, courses, and programs of study. Such changes may be made without notice, although every effort will be made to provide timely notice to students. It is the responsibility of the individual student to confirm that all appropriate degree requirements are met.

Elizabeth D. Liddy
Interim Vice Chancellor and Provost

## About Syracuse University

Syracuse University, located in the City of Syracuse in the center of New York State, is a private coeducational university comprising 12 undergraduate and graduate schools and colleges. Founded in 1870, the University today has an enrollment of more than 13,000
undergraduates and close to 6,000 graduate and Law students representing all 50 states, more than 100 countries, and a variety of social and economic backgrounds.
Syracuse combines the supportive network of a small college with the superior resources and enhanced research and immersion opportunities needed for students to achieve their academic and professional goals. Students will learn from world-class teachers, assist in critical research, collaborate across disciplines, and engage in the many-faceted intellectual, cultural, and social activities and events that comprise this vibrant campus community. In and out of the classroom, students will gain the knowledge, skills, and experience needed for them to excel in whatever field they choose to pursue.
Syracuse University's picturesque main campus reflects its rich heritage, with an architectural mix of classic and contemporary academic buildings. The Hall of Languages and its early hillside companion, Crouse College, are listed in the National Register of Historic Places. At the heart of the campus is its sweeping "Quad"-an open expanse of lawn and walkways, and a popular gathering place for students throughout the day.
Syracuse University is chartered by the New York State Board of Regents and accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104; 267-284-5000. Professional accreditation for each of the professional colleges and schools accords with the regulations of the appropriate professional association. For further information, contact the dean's office of each school or college.
Syracuse University is committed to compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and all other applicable laws prohibiting disability discrimination. These statutes generally prohibit discrimination against individuals with disabilities and provide that no otherwise qualified person with a disability shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Students who may need assistance should contact the Office of Disability Services, Room 309, 804 University Avenue; 315-443-4498, 315-443-1371 (TY), www.disabilityservices.syr. edu.

## Tuition and Fees

Bursar Operations publishes the Syracuse University Bulletin: Tuition, Fees, and Related Policies, which provides information about tuition, room, meal plans, and other University fees. This publication is available online at http:// comptroller.syr.edu/comptroller/uploads/

## Academic Calendar

The Academic Calendar for 2015-16 is available at https://syr.edu/registrar/acadcalendars/ acaddl2015-16.pdf

## Admissions and Financial Aid

## Undergraduate Admission

To receive information about undergraduate admissions, please contact the Office of Admissions, 100 Crouse-Hinds Hall, 900 South Crouse Avenue, 315-443-3611, or send an e-mail to orange@syr.edu. Visit our web site at admissions.syr.edu

## Financial Aid

To receive information about financial aid, please contact the Office of Financial Aid and Scholarship Programs located at 200 Archbold North. Reach us by telephone at 315-4431513, or send an e-mail to syr.edu/financialaid/ contact_us. Visit our website for detailed financial aid information at http://financialaid.syr.edu

## Graduate Admission

## Post-Secondary Education Requirements

To be considered for admission, an applicant to a graduate program at Syracuse University must provide documentation of having earned the degree required for admission to the particular program or documentation demonstrating that the applicant will complete the required degree prior to beginning studies at Syracuse University. In most cases, this will be a U.S. bachelor's degree or its equivalent from another country. For some degree programs, this will be a master's degree or its equivalent from another country. Degrees earned by international applicants must be from colleges or universities that are recognized by the national educational authority of the institution's home country.
If admitted, students will be required to submit official degree bearing transcripts. All official documentation must bear the appropriate signatures and seal of the institution that issued it and must be received by Syracuse University in a sealed envelope directly from that institution.

For students who have received a degree(s) from a U.S. institution(s):

Documentation of a degree from a U.S. institution is a transcript indicating that a degree has been awarded and the date on which it was awarded.

For students who have received a degree(s) outside the U.S.:

Documentation of a degree from an institution outside the U.S. consists of a diploma, certificate, or certificate of graduation indicating that a degree has been awarded and the date on which it was awarded AND a transcript (mark sheet, statement of marks, grade report) of all courses taken and grades for each course completed for the degree awarded.

To meet this requirement, contact the Registrar's Office of the higher educational institution that conferred your degree and have one copy of your official transcript(s) sent to Syracuse University. All original transcripts must be in English or translated in English and notarized by the Registrar's Office at the institution attended. The institution should mail official degree bearing transcripts to:

Enrollment Management Processing Center Syracuse University
Graduate Admissions Processing
P.O. Box 35060

Syracuse New York 13235-5060

## General Required Materials

Individuals interested in applying to a graduate program offered at Syracuse University must complete an official graduate application and submit one copy of records of all previous post secondary education. Most departments also require three letters of recommendation and scores from standardized aptitude tests. The Program Requirements List by School/College included in the Graduate Application contains the specific tests required by each academic unit.

## International Students

Those applicants whose primary language of instruction has not been English must take the Test of English as a Foreign Language (TOEFL). Applicants who are citizens of the following English-speaking countries are not required to submit TOEFL scores: Australia, Bahamas, Barbados, Canada, Fiji, Ireland, Jamaica, New Zealand, Trinidad and Tobago, and the United Kingdom.
Please be aware that exam scores are not generally available until four to six weeks after the exam is administered. It is the applicant's responsibility to ensure that exam scores reach Syracuse by any applicable deadlines. All scores for TOEFL, GRE, and GMAT are reported to a single location at Syracuse University. The institution
code for Syracuse University is 2823.
Each academic unit establishes acceptable scores and may also require other demonstrations of English language competence. Details are available from academic units directly.

If you are admitted and need to obtain a nonimmigrant student visa to enter the U.S. or transfer to Syracuse University from another school in the U.S., you must show evidence of having secured sufficient funding for at least the first year of study. For a privately sponsored applicant, acceptable evidence of such funding consists of a certified current bank statement on official bank letterhead, signed by an authorized bank official, indicating that sufficient funds exist to meet at least first-year expenses in U.S. dollars. A government-sponsored applicant must submit an original award letter (or a certified copy of an award letter). The letter must state the annual amount of the award in U.S. dollars.

All financial documents must be written in English and valid within one year of the start of the semester. Please note that it is only possible to estimate the annual cost of attendance for graduate students because costs vary widely according to the number of credits taken as well as the lifestyle of the student.
Non Immigrant Alien Students
Syracuse University is authorized under federal law to enroll non immigrant alien students.
Graduate Financial Assistance
Many graduate students receive financial assistance, either through Syracuse University or outside programs. For a full list of funding opportunities, visit Funding Options in the Graduate School website for additional information and deadlines.

## Hours of Operation

Academic building hours may be found at http:// classrooms.syr.edu/home/policy-on-use-and-locking-of-academic-buildings/\#establishing-building-hours

## University Facilities

Syracuse University students learn, study, and play among the 300 buildings on 900 acres that make up the campus. The University's 145-year history is reflected in buildings across campus, with architectural styles ranging from Romanesque to modern. Fifteen buildings are listed in the National Register of Historic Places.

- The College of Arts and Sciences' humanities programs are concentrated in the Hall of Languages, Huntington Beard Crouse Hall, Bowne Hall and the Tolley Humanities Building. Facilities for instruction and research in the
sciences are located in the Life Sciences Complex, Physics Building, Heroy Geology Laboratory, Carnegie Library, the Center for Science and Technology, and on South Campus at 621 Skytop Road.
- The Maxwell School of Citizenship and Public Affairs is housed in Primarily in Maxwell Hall and Eggers Hall, additional facilities in Lyman Hall, and Crouse Hinds Hall.
- The College of Visual and Performing Arts is comprised of the Departments of Art, Design, Transmedia, Drama, and Communication and Rhetorical Studies; and the Setnor School of Music. The Departments of Art and Design are located in and the Dorothea Ilgen Shaffer Art Building, Smith Hall, the Comstock Art Facility, and the Nancy Cantor Warehouse in downtown Syracuse. The Department of Drama is located in the Regent Theatre Complex, which also houses Syracuse Stage, a regional equity theater company. The Setnor School of Music is located in Crouse College. The Department of Communication and Rhetorical Studies is located in Sims Hall and the Department of Transmedia is located in the Dorothea Ilgen Shaffer Art Building.
- The School of Architecture is located in Slocum Hall.
- The Syracuse University College of Engineering and Computer Science is housed in Link Hall, the Center for Science and Technology, the Syracuse Center of Excellence Headquarters, Bowne Hall, and on South Campus at 621 Skytop Road.
- The College of Law is located in Dineen Hall.
- The David B. Falk College of Sport and Human Dynamics includes the Department of Child and Family Studies, the School of Social Work; and the Department of Sport Management located in the recently renovated Falk College Complex (the former College of Law). The Public Health and the Nutrition Science and Dietetics Programs are located in the Falk College Complex, along with the Dean's Office and other administrative operations, including Student Services. The Food Studies Program is located In Lyman Hall. The Department of Marriage and Family Therapy is located in offcampus facilities in Downtown Syracuse.
- The Martin J. Whitman School of Management is housed in the School of Management building, located at University Avenue and Marshall Street.
- The S.I. Newhouse School of Public Communications is located in the threebuilding Newhouse Communications Complex along University Place.
- The School of Information Studies is located in Hinds Hall.
- The School of Education is housed primarily in Huntington Hall, with additional program and administrative offices in the Hoople Building, the Henry Center, and the Women's Building.
- University College is located at 700 University Avenue, between Marshall and Adams streets.
Overseas, SU Abroad houses programs in Florence and London, along with other sites.

Nationally, SU maintains a presence in New York City at the Joseph I. Lubin House, in Washington, D.C., at the Paul Greenberg House, and in California at the SU in LA offices. A variety of programs and events draw alumni, students, and friends to the centers.

## Student Life Facilities

Students have a variety of housing options on Main Campus and South Campus. They can live in single rooms, double rooms, and suites in residence halls and apartments. Students can grab a meal or a snack at any of the five dining centers or several snack bars around campus.
The Schine Student Center is the hub of activity on Main Campus, housing a food court, auditorium, gallery, lounges, meeting rooms, game room, and student organization offices. The Schine also houses the main campus bookstore, which also has several on campus branches. The Carrier Dome is home to sporting events, Commencement, and musical and cultural events. An international student center, LGBT resource center, counseling center, off-campus and commuter office, the Women's Building, Watson Theater, Robert B. Menschel Media Center, and several other facilities accommodate student services and extracurricular programs.
Recreation facilities abound throughout campus. Archbold Gymnasium, Flanagan Gymnasium, the Women's Building, Ernie Davis Hall, and Marshall Square Mall contain fitness centers, swimming pools, gymnasiums, exercise rooms, dance studios, and courts for racquet sports. Manley Field House also is available for indoor recreation and student activities. Outdoor tennis courts and playing fields are located on both Main and South campuses. The Goldstein Student Center on South Campus serves Skytop and Slocum Heights students. The Tennity Ice Pavillion offers skating rinks for recreational and intramural skating sports. Hendricks Chapel, on Main Campus, sits majestically on the Quad as the focus of programs of the dean of the chapel. The St. Thomas More Chapel serves Roman Catholic students, and the Winnick Hillel Center for Jewish Life serves Jewish students.

## Auxiliary Operations

Auxiliary service facilities include University Health

Services and the Goldstein Alumni and Faculty Center. University administrative functions are conducted in Crouse Hinds Hall, the Women's Building, Steele Hall, the Schine Student Center, and at 111 Waverly Avenue on Main Campus and in the Skytop Administrative Services Building and 621 Skytop Road on South Campus.
Academic Computing Services and facilities for administrative data processing are located in the new Green Data Center and Machinery Hall, with administrative offices located in the Center for Science and Technology.
The State University College of Environmental Science and Forestry (ESF) is situated on its own campus, adjacent to Main Campus.

## Library

On the web at library.syr.edu, the Syracuse University Libraries are an active partner in the teaching, learning, and research mission of the University. The Libraries offer extensive print and online collections in a wide range of formats, knowledgeable librarians and staff, and up-todate technology in support of all SU academic programs. The Learning Commons in Bird Library offers 24-hour access, technology, and research help, all in a single location. The Ask Us section of the website outlines the range of options for reference and research help, available in-person, via email, chat, text, or phone.
The Libraries' diverse collections covering all university academic disciplines include more than 3.5 million printed volumes, over 60,000 online and print journals, as well as extensive collections of maps, images, sound and video recordings, music scores, microforms, rare books, and manuscripts. Over 500 research databases contain the full text and images from hundreds of thousands of e-books, journals, and newspapers. All are discoverable via the Summon searchbox on the Libraries' homepage. Online resources are accessible to SU-affiliated users from any location, including residence halls, off-campus apartments, and international centers.
Libraries are equipped with wireless access, laptops and other equipment for loan, and provide a variety of study spaces, including group and individual study rooms, technology-equipped study rooms, and designated quiet study spaces. Library workstations, including Macs and PCs, are equipped with standard campus software applications, specialized software for multimedia production, GIS, and adaptive technologies for disabled users.

The SU Libraries include:

- Bird Library, home to the Learning Commons, Pages (café), library administrative offices, and the Special Collections Research Center; houses humanities and social science
materials;
- The Carnegie Library on the Quad; features a quiet reading room and computer cluster; houses materials in science disciplines, technology, mathematics, and technical arts;
- The Architecture Reading Room, located adjacent to the School of Architecture in Slocum Hall;
- The Belfer Audio Archive, which houses historic sound recording collections, and;
- The SU Libraries Facility, a high-density storage center on South Campus.
Other separately administered campus libraries include the Martin Luther King, Jr. Memorial Library (African-American Studies Department), the Law Library (College of Law), and Moon Library (SUNY College of Environmental Science and Forestry).


## Information

 Technology ServicesCenter for Science and Technology, 315-4432677
http://ITS.syr.edu
help@syr.edu
Information Technology Services (ITS) ensures that students at Syracuse University have access to a broad range of computing and information technology services. The services include highspeed wired and wireless Internet connections in buildings across campus, including wireless in all residence halls; high-tech, multimedia classrooms and collaborative spaces; e-mail; web conferencing; digital publishing; online teaching and learning; and campus computer labs equipped with the latest software technologies used in academic coursework, including statistical analysis, database management tools, and multimedia applications. Students also have access to space on the central computing system for file storage and for creating personal Web pages. More than 4,000 classes are supported via Blackboard, an online learning environment that enables anytime, anywhere student engagement. MySlice provides every student a secure, online gateway to all essential University resources including the course catalog, class registration and schedules, grades, transcripts, and accessing financial aid, tuition, housing and meal plan information and services. Additional computing resources for specific academic programs and research activities are available through the University's schools and colleges. SU is a leader in developing and using World Wide Web technologies and is a member of the Internet 2 consortium. SU's Green Data Center is a showcase of world-class innovations in advanced energy-efficient information technology
and building systems, making it one of the world's "greenest" computer centers.

## Getting Help

In addition to maintaining the University's computing and network services, Information Technology Services (ITS) provides students with a variety of support options:

- General information about SU computing and services offered by ITS can be found by searching the ITS public web site at http://its. syr.edu.
- Help with NetID account issues is available on the ITS NetID Services web page at http:// netid.syr.edu.
- Students, faculty and staff can visit the ITS Service Center. Center location, hours and services are available on the ITS web site at http://its.syr.edu/support/student.cfm.
- Students, faculty and staff can call the ITS Service Center at 315-443-2677, or e-mail help@syr.edu.
- Online support information is available at http://answers.syr.edu.


## Health Services

Located on campus at 111 Waverly Avenue, Syracuse University Health Services (SUHS) specializes in college health and serves the health care needs of SU and SUNY ESF students. SUHS provides student-centered ambulatory health care. On campus services include:

- Office visits
- Immunizations, vaccines
- Laboratory
- Ambulance \& non-urgent medical transport
- Travel medicine
- Nutrition Counseling
- Pharmacy
- Health education
- Public health monitoring and oversight

Office visits are provided by appointment. To make an appointment, call 315-443-9005.
Xray services and referral for specialty consultation can be arranged by the medical provider.

## Confidentiality

Medical records are maintained for all students and all information is kept confidential. Protected health information can ONLY be released with written consent of the patient.

## Ambulance

Syracuse University Ambulance (SUA) provides basic life-support-level emergency medical and other services to the SU and SUNY ESF communities. For ambulance service, call 711 from a campus phone, \#SU from a cell phone, or 315-443-4299.

## Student Health Insurance

Unexpected health care expenses can jeopardize a student's financial stability or create barriers toward completing a degree. While all students can receive primary care through Syracuse University health Services, services needed beyond primary care, such as hospitalization, surgery, or specialty care, are performed offcampus. Health insurance provides students with the reassurance that they are prepared for any medical situation.

Beginning in the 2015-16 academic year all incoming, newly-matriculating full-time students (graduate, law, and undergraduate), all full-time matriculated international students (current and incoming, graduate and undergraduate), and all graduate student Fellows will be subject to the insurance requirement. By the 2016-17 academic year, all full-time matriculated students will be subject to the requirement.

Students should always carry their health insurance information from them. Additional information, including a Frequently Asked Questions page, is available on our websitehttp:// health.syr.edu/new-student-health-insuranceplan.html
The University strongly recommends that students carry health insurance to cover expenses not covered by the Health and Wellness Fee and medical expenses incurred outside of Health Services such as specialized care, emergency room care, and hospitalization. Students should always carry their health insurance information with them. For more information, call 315-4432668.

## Immunization Requirements

Proof of immunity to measles, mumps, and rubella (which may be obtained by contacting your high school or primary care physician) and a completed response form related to meningococcal meningitis vaccine are required by New York State public health law.

The Health History and Immunization Form must be sent or faxed (315-443-9010) to Health Services prior to a student's arrival on campus.

If these documents are not received prior to arrival, students will risk strict administrative consequences, including the inability to register for classes.

If you do not have the information available to complete this form, or have questions, or concerns, please contact Health Services at 315-443-9005.

Additional information is available at health.syr. edu

## Career Services

Suite 235, Schine Student Center (315) 443-3616
careerservices.syr.edu
Career Services is here to help students design their college experience and apply it to the world of work. From deciding on a major to searching for jobs and internships to preparing for interviews, Career Services provides individualized career guidance. Additionally, the office hosts large-scale events and programs that connect students with employers and SU alumni in their desired career fields.

Students are encouraged to utilize both the central Career Services office in the Schine Student Center, as well as the career office in their home school/college. Visiting both offices early in their college careers is recommended.

A brief description of services:
Career advising and guidance. Through advising sessions, formal assessments, and informational resources, the office's career counselors can help students gain clarity in their academic and career interests. For students who know exactly what field they wish to pursue, counselors can assist in strategizing and navigating the internship/ job search process. They can also help students build application documents such as resumes and cover letters, and strengthen interview skills. Alumni Networking. The 'CuseConnect Linkedln group is a valuable resource for students as they explore careers and break into the working world. 'CuseConnect is a Linkedln group that allows current students to connect with, and learn from, SU alumni in their particular career fields. In addition, alumni post jobs and internships within 'CuseConnect to provide students with opportunities within the organizations in which they work. Students can also learn about opportunities by keeping an eye on \#HireOrange on Twitter and by following the @WorkingOrange account. Employer Connections. Each semester, Career Services hosts large-scale career fairs and on-campus interviews to connect students with employers in their desired industries. Typically, several hundred employers attend these fairs and hold on-campus interviews, seeking to hire for internship and full-time positions.

Additionally, Career Services manages OrangeLink, a searchable database which stores all of the internship and job postings submitted to SU from employers. OrangeLink, accessible to all SU students and alumni, is a particularly effective way to identify and apply for relevant positions.

Career Services also regularly provides workshops for classes, student organizations, residence halls, and other groups on campus.

For more information about Career Services, or to schedule an appointment with a career counselor, please call (315)443-3616.

# Syracuse University Internship Opportunities 

## Elective Internships: Syracuse University Career Services

235 Schine Student Center, 315-443-3616 http://careers.syr.edu/internships.htm
The Career Services office in Schine Student Center helps students find and arrange local and national internships (whether they carry academic credit or not). Internships may be taken during any semester or summer session. Career Services facilitates internships in most career areas and makes information about internship options available to graduate and undergraduate students from across the University. Students who want to receive academic credit for their internship are subject to the provisions and regulations of the school or college in which they are enrolled.

Elective internships can provide students with opportunities to apply what they have learned in the classroom, explore career options, develop specific career skills, and become involved with community service. The specific role of the intern varies with each host organization, depending upon the student's goals, objectives, and skills and the organization's needs and resources.

## Academic Credit

Internships for elective academic credit require at least 45 hours of internship work for each credit earned. Thus, during a regular 15 -week semester, an intern may earn three credits by working an average of 9 hours a week. During summer sessions, work schedules vary widely and often include more than the minimum number of hours. The number of credits are determined by the specific department, school or college in which a student is enrolled. On average students register between 1 and 6 credits.
During fall and spring semesters, full-time
undergraduate students may include internship course credits as part of their regular course load, which allows up to 19 credits without incurring additional tuition charges. Undergraduates accepted for summer sessions internships pay tuition at the rate set for other summer credits. All graduate students and all University College students taking internships for credit pay tuition at the rates set for other credits.

Interns must be registered during the semester or summer session in which their internships take place. Retroactive credit is not granted.
For further information about local and national internship opportunities, program policies, and application and registration procedures, contact the Career Services office in Schine Student Center, or visit the Career Services web site, http://careerservices.syr.edu.

## Interdisciplinary and Specialized Study

Syracuse University has long promoted the development of special programs and research groups, many of an interdisciplinary nature. Not only does Syracuse offer a wide array of interdisciplinary programs of study, but many individual courses provide students with considerable flexibility in developing their academic programs. Students enrolled in certain programs at Syracuse may also take selected courses at one of the two SUNY institutions adjacent to the campus, the College of Environmental Science and Forestry and SUNY Upstate Medical University. Detailed descriptions and requirements of these programs are given in the appropriate colleges' and schools' listings in this catalog.

The interdisciplinary network at Syracuse also encompasses faculty members who serve in dual capacities, holding joint appointments in more than one department within the University or at other institutions. For example, some School of Education faculty members regularly instruct classes in the Maxwell School of Citizenship and Public Affairs and vice versa. Other faculty members hold external appointments in addition to their posts at the University.

## Graduate Study

Generally, graduate students select a program of study within one academic unit that leads to a degree conferred by the Graduate School. Students may also choose to pursue formal joint-degree programs. In such cases, the student is enrolled in more than one school or college. A dually enrolled student must meet the major requirements in each school. Examples of dual programs are the law/public administration
(J.D./M.P.A.) program, the law/library science (J.D./M.S.) program, the law/business administration (J.D./M.B.A) program., and the law/cultural foundations of education (J.D./M.S) program, law/forensic science (J.D./M.A.), and law/computer science (J.D./M.S.).

Similar in concept to joint degree programs are concurrent degree programs, which also allow students to pursue programs of study in more than one discipline simultaneously, often with fewer total credit requirements than the two separate degrees. This plan leads to two degrees, one in each program of study. Concurrent degree arrangements are also available to Syracuse University graduate students and SUNY College of Environmental Science and Forestry students who wish to combine the study of public administration, law, management, education, or public communications with study in environmental science and forestry.
Similarly, The Master of Public Health (M.P.H) degree is a collaborative program, sponsored jointly by SUNY Upstate Medical University (UMU) and Syracuse University (SU). Participating colleges at Syracuse University include the Maxwell School of Citizenship and Public Affairs, the College of Human Ecology, L.C. Smith College of Engineering and Computer Science, and the College of Law.
Under the terms of a formal Scholar Exchange Program, Syracuse graduate students may avail themselves, for up to one year of study, of classes offered by Cornell University or the University of Rochester in addition to the courses and programs offered by Syracuse University.

## The CASE Center

The Center for Advanced Systems and Engineering (CASE) is an ESD/NYSTAR-designated Center for Advanced Technology (CAT) funded by New York State to support innovative, interdisciplinary research in complex information-intensive systems. CASE's mission is to catalyze growth in the state's high technology economy by providing industry with technical expertise in data fusion, data mining, command and control, security and assurance, wireless communication, intelligent computing, sensor network/management, unmanned aerial systems, and other related areas.

CASE serves as an access point for industry to engage Syracuse University, supporting programs for students as well as sponsored research projects. Through CASE's Co-op and Internship Program, graduate students can gain practical real-world experience working directly with leading private sector companies in a wide range of industries. For students interested in entrepreneurship, CASE also offers a unique opportunity to work with high-potential start-up
companies through its on-campus incubator. A CASE experience can significantly enhance students' professional development and career options.

## The Graduate School

Gabrielle Chapman, Associate Dean
207 Bowne Hall, 315-443-2543
gradsch.syr.edu
grad@syr.edu
Graduate study and research have been recognized as a critical piece of Syracuse University's mission since its inception in 1870. Today, every school and college at Syracuse offers graduate study, and the University awards approximately 1,700 master's degrees and certificates of advanced study and 150 doctoral degrees annually. A complete listing of graduate degree programs can be found in the Academic Offerings Tab section in this catalog.

Individual graduate programs are administered by departments or interdisciplinary committees and are subject to approval by the appropriate schools and colleges and by the University Senate. These policies and standards are administered by the Graduate School. All postbaccalaureate degrees are awarded through the Graduate School, with the exception of the J.D. degree, which is awarded through the College of Law.
Graduate students will learn from a full-time faculty of more than 800 scholars, many of them internationally or nationally recognized in their field, and will assist faculty both in the classroom and with important research initiatives.
All Syracuse University graduate degree programs, with the exception of law, are organized under the auspices of the Graduate School. Applications for admission are submitted to the Graduate School, which also confers degrees upon graduation. The graduate degree programs themselves, however, are offered by faculty of the University's 12 academic schools and colleges. This unique organizational structure fosters intellectual collaboration and exploration across the disciplines while at the same time recognizing the highly specialized nature of graduate-level academic work.
Requests for information about graduate programs should be directed to the specific academic units offering those programs. Questions about University-wide policies should be directed to the Graduate School.

## Syracuse University Graduation Rate

In compliance with the federal Student-Right-toKnow and Campus Security Act, and regulations
of the U.S. Department of Education, Syracuse University provides the following information to current and prospective students: Of the cohort of full-time degree-seeking undergraduate students who first enrolled at Syracuse University in fall 2008, 80.41 percent had earned their bachelor's degrees as of August 2014. These beginning and end dates comprise 150 percent of the normal length of full-time study (4 years) needed to complete a typical undergraduate degree program. While this calculation meets the act's requirements for determining a graduation rate, Syracuse University recognizes that many students for diverse reasons are unable or choose not to complete their degrees in a continuous sequence of full-time enrollment and, therefore, that the rate may not accurately reflect the commitment and achievement of its students. Moreover, the act's stipulation that the graduation rate be that of the cohort of entering full-time students leaves out the significant population of part-time students who constitute an important part of the Syracuse University community.

## Graduate Student Life

Graduate students at Syracuse University enjoy many academic, cultural, recreational, and social activities outside the classroom within the University's vibrant campus life.
Students can choose from more than 200 student organizations, including performing arts groups; sports teams; and student-run print, radio, and broadcast media, to name a few. The Graduate Student Organization (GSO) takes an active part in formulating graduate policy, exploring problems of concern to graduate students, and is represented on the University Senate and the University Board of Trustees.
Several recreational facilities on campus draw students all hours of the day for invigorating workouts. Students can challenge a friend to a game of squash at Archbold Gymnasium, or master hip hop during a late night dance class. Facilities also include weight machines, free weights, and cardiovascular exercise machines, along with basketball, racquetball, and handball courts. For more structured activities, Syracuse University fields varsity teams in a number of sports for men and women. Some teams compete in the 50,000-seat Carrier Dome, located on campus.
Concert and lectures with nationally and internationally known presenters are held frequently at Hendricks Chapel and many other locations across campus. On-campus entertainment sources also include first-run and classic movies presented nearly every night of the week by various film societies; forums; art exhibitions; and plays. The Setnor School of Music organizes performances featuring students, faculty,
and guest artists.
The Mary Ann Shaw Center for Public and Community Service offers students the opportunity to get involved in service projects and volunteer activities. Opportunities for involvement extend into the community as well, with the University-city Connective Corridor initiative linking the campus by bus with downtown galleries, museums, theaters, music venues, and cultural festivals.
Traveling exhibitions and student and faculty art are shown throughout the year, principally in the Joe and Emily Lowe Art Gallery on campus. For stage performances, the John D. Archbold Theater is home of the professional Equity company Syracuse Stage. The intimate Experimental Theater is used for student productions.
Students gather at the Schine Student Center on Main Campus to meet friends, grab lunch at Schine dining, or pick up art supplies at the main bookstore. The Goldstein Student Center provides the same atmosphere for students residing on South Campus.

## Adjunct Faculty and Teaching Assistants

## Adjunct Faculty by School, Department, or Division

A \& S - Curriculum/Instruction 2 A \& S - Writing Program 4 African-American Studies 1 Anthropology 1 Architecture 4
Art \& Music Histories 1
Arts \& Sciences - Honors 16
Arts \& Sciences - Dean 3
Biology 2
Civil \& Envirnmtal Engineering 4
Communication Rhetorical Study 4
Communication Sciences \& Dis 3
Counseling \& Human Services 2
Cultural Fndtn-Intergrp Dialog 2
Cultural Foundations Ed Curric 1
CVPA-Drama 23
CVPA-Foundation 5
CVPA-School of Music 41
Department of Art at Comart 3
Department of Art at Shaffer 6
Economics 1
Ed-Teaching \& Leadership 4
Ed-Teach \& Ldrship-Art Eductn 1
Ed-Teach \& Ldrship Music 1
Elec Eng \& Computer Science 8
English 3
Exercise Science 27
FALK Child \& Family Studies 3
FALK Marriage \& Family Therapy 2

| FALK Nutrition Sci \& Dietetics | 2 |
| :--- | :--- |
| FALK Public Health | 1 |
| FALK Social Work | 10 |
| FALK Sport Management | 1 |
| Fashion \& Design Technology | 2 |
| Forensic Science Institute | 7 |
| Higher Education | 1 |
| History | 1 |
| Information Studies-Dean | 28 |
| Languages, Lit \& Linguistics | 29 |
| Law College | 7 |
| Mathematics | 4 |
| Maxwell Dean's Office | 2 |
| Mech and Aerospace Engineering | 1 |
| Philosophy | 2 |
| Psychology | 4 |
| Public Admin \& International Affairs | 4 |
| Public Communications | 38 |
| School of Design | 19 |
| School of Management | 22 |
| Sociology | 5 |
| Transmedia Studies | 15 |
| University College - BPS | 2 |
| University College-Fin Stdt Sp | 1 |
| University College-SCP Gen Ad | 6 |

## TA'S by School, Department, or Division

| A \& S - Curriculum/Instruction | 3 |
| :--- | :--- |
| A \& S - Women's Studies | 4 |
| A \& S - Writing Program | 20 |

A \& S - Writing Program 20
$\begin{array}{ll}\text { African-American Studies } & 7 \\ \text { Aging Studies Institute } & 2\end{array}$
Anthropology 14
Architecture 31
Art \& Music Histories 4
Biology 31
BMC Engineering 15
CVPA-Foundation 9
CVPA-School of Music 17
Chemistry 52
Civil \& Environmental Engineering 13
Communication Rhetorical Study 11
Communication Sciences \& Dis 4
Continuing Ed \& Global Outreach 1
Counseling \& Human Services 5
Cultural Foundations Ed Curric 6
Department of Art at Comart 12
Department of Art at Shaffer 5
Earth Sciences 17
Economics 31
Ed-Instructional Technology 4
Ed-Teaching \& Leadership
Ed-Teach \& Ldrship-Art Eductn 2
Ed-Teach \& Ldrship Music 2
Ed-Teach \& Ldrship Sci Teach 3
Elec Eng \& Computer Science 48
A \& S - Curriculum/Instruction 4
A \& S - Women's Studies 3
A \& S - Writing Program 20
AASC
African-American Studies 8
Anthropology 14
Architecture 31
Art \& Music Histories 4
Biology 25
BMC Engineering 12

| CVPA-Foundation | 8 |
| :--- | :--- |
| CVPA-School of Design | 1 |
| CVPA-School of Music | 15 |
| Chemistry | 61 |
| Civil \& Environmental Engineering | 13 |
| Communication Rhetorical Study | 10 |
| Communication Sciences \& Dis | 3 |
| Counseling \& Human Services | 7 |
| Cultural Foundations Ed Curric | 6 |
| Department of Art at Comart | 14 |
| Department of Art at Shaffer | 6 |
| Earth Sciences | 23 |
| Economics | 29 |
| Ed-Instructional Technology | 4 |
| Ed-Teaching \& Leadership | 13 |
| Ed-Teach \& Ldrship-Art Eductn | 2 |
| Ed-Teach \& Ldrship Math | 1 |
| Ed-Teach \& Ldrship Music | 2 |
| Ed-Teach \& Ldrship Sci Teach | 4 |
| Elec Eng \& Computer Science | 35 |
| Engineering-Dean's Office | 1 |
| English | 47 |
| Exercise Science | 9 |
| FALK BMW Child Dev. School | 2 |
| FALK-Child and Family Studies | 8 |
| FALK-Nutrition Science \& Dietics | 11 |
| FALK-Public Health | 4 |
| FALK-Sport Management | 4 |
| Geegraphy | 20 |
| Higher Education | 1 |
| History | 23 |
| Information Studies-Dean | 3 |
| Languages, Lit \& Linguistics | 19 |
| Mathematics | 41 |
| Maxwell Dean's Office | 5 |
| Mech and Aerospace Engineering | 20 |
| Philosophy | 23 |
| Physics | 25 |
| Political Science | 32 |
| Psychology | 22 |
| Psychology Service Center | 1 |
| Public Communications | 5 |
| Reading \& Language Arts | 7 |
| Religion | 17 |
| School of Management | 27 |
| Science Teaching | 2 |
| Sociology | 15 |
| Transmedia Studies | 13 |
| UC Summer Programs Faculty | 35 |
| University College-SCP Gen Ad |  |

## Syracuse University Roster

## University Officers

Each officer's year of appointment to the University staff is given in parenthesis.
Kent Syverud, B.A., J.D., (2014)
Chancellor and President
Elizabeth D. Liddy B.A., M.S., Ph.D. (1988)
Interium Vice Chancellor and Provost
Louis G. Marcoccia, B.A., M.S., C.P.A., Ed.D. (1975)
Executive Vice President and Chief Financial
Officer
Jean Gallipeau B.S., M.B.A., C.P.A. (2013)
Comptroller
David J. Smith B.S., M.B.A.,C.F.A. (2013)
Treasurer

## Academic Officers

Andria Costello Staniec, B.S., M.S., Ph.D. (1999)
Associate Provost for Academic Programs
Christopher Sedore, B.S. (1991)
Senior Vice President for Enrollment Management
K. Matthew Dames, B.S., M.S., J.D., Ph.D. (2008)

Interim Dean of the Libraries and University Librarian
Effective August 3: David Seaman B.A., M.A.
(2015)

University Librarian and Dean of the Syracuse University Libraries

Gina Lee-Glauser, B.S., M.S., Ph.D. (2001)
Vice President for Research
Schools and Colleges
School of Architecture
Michael A. Speaks, Dean
College of Arts \& Sciences
Karin Ruhlandt, Dean
School of Education
Joanna O. Masingila, Dean
College of Engineering \& Computer Science

Chilukuri K. Mohan, Interim Dean
Effective August 1: Teresa A. Dahlberg, Dean
David B. Falk College of Sport and Human Dynamics

Diane Lyden Murphy, Dean
School of Information Studies
Jeffrey Stanton, Interim Dean
College of Law
Hannah Arterian, Dean
Effective August 1 William C. Banks, Interim Dean

Martin J. Whitman School of
Management

# Maxwell School of Citizenship and Public Affairs 

James B. Steinberg, Dean

## S.I. Newhouse School of Public Communications

Lorraine Branham, Dean
College of Visual and Performing Arts

Ann Clarke, Dean

## University College

Bethaida Gonzalez, Dean

## Student Privacy Rights (FERPA)

Annual Notification of Rights Under the Family Educational Rights and Privacy Act

Syracuse University fully complies with the federal Family Educational Rights and Privacy Act and its implementing regulations, each as amended (collectively, "FERPA"), and with guidelines recommended by the American Association of Collegiate Registrars and Admissions Officers. FERPA gives students certain rights with respect to their education records. These rights include:
I. The right to inspect and review the student's education records.
Students should submit to the University Registrar (106 Steele Hall, Syracuse University, Syracuse, NY 13244-1120) a written request that identifies the record(s) they wish to inspect. The University Registrar will make arrangements for access, excluding records and documents considered exceptions or to which a student has waived his or her right of access, and notify the student of the time and place where the records may be inspected. Access will be provided within a reasonable time, not to exceed 45 days after the Registrar's receipt of the student's request.
II. The right to request the amendment of the student's education records that the student believes are in accurate or misleading, or in violation of the student's privacy rights. Students who wish to ask the University to amend a record should obtain a Request to Amend or Remove Education Records form from the Registrar's Office and clearly identify the part of the record they want changed and specify why it is inaccurate, misleading or in
violation of their rights of privacy. Note that this does not include a right to contest grades or other substantive matters accurately reflected in the records. Thus, this procedure may not be used to change a grade in a record unless the grade assigned was inaccurately recorded. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and of the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when he or she is notified of the right to a hearing. If the hearing results in a final determination not to amend the record, the student is permitted to place a statement with the record commenting on the contested information, stating his or her disagreement with the decision not to amend the record, or both.
III. The right to provide written consent before the University discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent. A student has the right to consent to the disclosure of personally identifiable information contained in his or her education records, except to the extent that FERPA authorizes disclosure without consent. Set forth below is information about some of the circumstances in which FERPA authorizes such disclosures.
The University reserves the right to make disclosures of information from education records without a student's consent in these and other circumstances in which such disclosures are permitted by FERPA.
A. The University may disclose education records without a student's prior written consent to school officials with legitimate educational interests.
A school official is:

1. a person employed by the University in an administrative, supervisory, academic or research or support staff position;
2. a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent);
3. a person serving on the Board of Trustees;
4. a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks; or
5. a person volunteering or otherwise performing services for the University.

A school official has a "legitimate educational interest" when he, she, or it has a need to access student education records for the purpose of performing an appropriate educational, research, administrative or other function for the University.
B. The University may disclose education records without consent to officials of another university, college or school in which a student seeks or intends to enroll, or is already enrolled, for purposes of the student's enrollment or transfer.
C. The University may disclose education records without consent to parents of a dependent student as defined by the Internal Revenue Service, when proof of dependency has been provided. A "parent" is a parent, guardian, or someone acting as a parent who meets the IRS standard. (Note: Students should refer to their individual school/ college policies concerning parental notification of information regarding academic misconduct and/or academic performance.)
D. The University may disclose education records without consent to appropriate parties in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals.
IV. The right to prevent disclosure of personally identifiable information that Syracuse University has designated as "Directory Information." Unless a student has followed the steps described below, the University may disclose "directory information" without consent in accordance with the provisions of FERPA. Directory information is defined as that information which would not generally be considered harmful or an invasion of privacy if disclosed. Syracuse University considers the following to be directory information:

## Name*

Current address and phone number
Permanent address and phone number SU email address*

Academic awards and honors
Athletic participation
Class/level*
Dates of attendance
Degree(s) earned and date(s)
Full/part-time status
Majors(s)/degree program(s)
Photograph or other visual image
Prior postsecondary institutions attended
SU ID number
SU school/college(s)*

* Asterisked items are displayed in the University's online directory

Students may block the public disclosure of directory information (in whole or in part) by filing a Request to Prevent Disclosure of Directory Information form with the Office of the Registrar, 106 Steele Hall. Requests may be filed at any time, and remain in effect permanently (including after departure from the University) until removed, in writing, by the student. The Registrar's Office will provide information about additional steps that must be taken by students who wish to prevent release of information regarding athletic participation and announcements of academic achievements to their hometown newspaper(s).

Filing of a Request to Prevent Disclosure will also prevent information from loading to Blackboard, an online course management system used in many SU classes, and may make a student ineligible for SUmail, SU's student e-mail system. For such students who are required to use Blackboard for one or more classes, the Registrar's Office will provide information about the additional steps that must be taken. Instead of SUmail, those who file a Request to Prevent Disclosure that includes their SU e-mail address will be provided an official SU e-mail account in the University's administrative e-mail system.

Students should carefully consider the consequences of a decision to prevent disclosure of Directory Information. Regardless of the effect upon students, the University assumes no liability as a result of honoring instructions that such information be withheld.
V. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Syracuse University to comply with the requirements of FERPA.
Any student who has reason to believe that the University is not complying with FERPA should inform the University Registrar in writing. The Registrar shall promptly review all such allegations and initiate appropriate actions. In addition, students have the right to file complaints with the United States Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. Complaints may be submitted in writing to:

Family Policy Compliance Office
U.S. Department of Education

400 Maryland Avenue, SW
Washington DC 20202-5920
Phone: 1-800-872-5327
For additional information about the University's FERPA policy, see http://supolicies.syr.edu/ ethics/ferpa.htm. Questions about FERPA, students' privacy rights, and compliance procedures may be directed to the Office of the Registrar, 106 Steele Hall, Syracuse University, Syracuse, NY 13244-1120, 315 443-2422.

Related Policy: Computer Law (from item VII of SU

Computing and Electronic Communications Policy)
Under Article 156 of the New York State Penal Code, criminal sanctions are imposed for offenses involving computers, software, and computer data. The offenses include unauthorized use of the computer, computer trespass, computer tampering, and unlawful duplication or possession of computer-related material. Improper or unauthorized access to, or release or manipulation of, any student record in such form is included in such offenses. All computers, software, data, business records, and student records of the University in any form, electronic or paper, belong to the institution. Any person committing an offense with respect to them may be subject personally to criminal sanctions and other liability. Federal laws may also apply to some circumstances.

## Student Complaint Process

The Syracuse University Grievance Procedures Policy is available at http://supolicies.syr.edu/ studs/grievance.htm. The Grievance Resolution process for graduate students is published at (http://graduateschool.syr.edu/ ). Complaint and grievance processes begin and are typically resolved at the department or school/college level.

If a complaint is not resolved satisfactorily internally (within the University), then students may file a complaint with the New York State Education Department (NYSED) which oversees higher education in New York. Their complaint process can be found at http://www.highered. nysed.gov/ocue/spr/COMPLAINTFORMINFO. html . Complaints may also be filed with the University's accrediting agency, Middle States Commission on Higher Education. See http://www.msche.org/documents/ ComplaintsInvolvingMemberCandidate.pdf (can be accessed from http://www.msche. org/?Nav1=POLICIES\&Nav2=INDEX ).

This information is provided in compliance with the Code of Federal Regulations, Chapter 34, §668.43(b) (http://www.ecfr.gov/cgi-bin/text-idx ?SID=342e66de1078436be939e1deb74f8ec0\& mc=true\&node=se34.3.668_143\&rgn=div8

## Distance Learning Students - Information

## Registration of Distance Programs

Syracuse University's degree and certificate programs delivered through distance education
are registered with the New York State Education Department (NYSED). Requirements for distance education differ state by state. Syracuse University has registered, has obtained exemption for registration, or is in the process of registering or obtaining exemption for the programs available in those states as required under local laws. (States (see below) with an asterisk (*) include specific statements required by those states

## Distance Learning Complaint Process for Out-of-State Students

Students residing in other states while enrolled in a course offered by Syracuse University are encouraged to utilize Syracuse University's internal complaint or review policies and procedures, typically initiated within the academic department, prior to filing a complaint with their state agency or agencies. See "Student Complaint Process" for additional information.
However, if the complaint is not resolved through these processes, a student may use the following list (current as of June 2015) to identify the office(s) to which complaints may be directed in the state in which the student resides.

If a complaint is not resolved satisfactorily within the University, then students may also file a complaint with the New York State Education Department (NYSED) which oversees higher education in New York state and/or with Middle States Commission on Higher Education, the University's accrediting agency. See "Student Complaint Process" for additional information.

## Alabama

Alabama Commission on Higher Education PO Box 302000
Montgomery, AL 36130-2000
http://www.ache.state.al.us/Content/
Departments/NRI/federal-reg.pdf
Alaska
Alaska Commission on Postsecondary Education PO Box 110505
Juneau, AK 99811-0505
EED.ACPE-IA@alaska.gov
http://akadvantage.alaska.gov/EDUCATOR-
SCHOOL/Postsecondary_Institutions/Consumer_ Protection.aspx

Arizona
Arizona State Board for Private Post-secondary Education
1400 W. Washington Street, Room 260
Phoenix, AZ 85007
https://ppse.az.gov/complaint
Arkansas
Arkansas Higher Education Coordinating Board

Arkansas Department of Higher Education
114 East Capitol Ave.
Little Rock, AR 72201
ADHE_Info@adhe.edu
http://www.adhe.edu/SiteCollectionDocuments/
AcademicAffairsDivision/Delores/APPENDIX\%20
J\%20Student\%20Grievance\%20complaint\%20
process\%20\%20new.pdf
California
California Bureau of Private Postsecondary
Education
P.O. Box 980818
W. Sacramento, CA 95798-0818
bppe@dca.ca.gov
http://www.bppe.ca.gov/forms_pubs/complaint. pdf
Attorney General's Office, California Department of Justice, Attn: Public Inquiry Unit PO Box 9044255
Sacramento, CA 94244-2550
http://ag.ca.gov/contact/complaint_form.
php?cmplt=PL
Colorado
Colorado Department of Higher Education
1560 Broadway, Suite 1600
Denver, Colorado 80202
http://highered.colorado.gov/Academics/
Complaints/default.html
Connecticut
Connecticut Department of Higher Education
61 Woodland St.
Hartford, CT, 06105-2326
(860)947-1800
info@ctdhe.org
Delaware
Delaware Higher Education Office
John G. Townsend Building, Suite 2
Dover, DE 19901
dheo@doe.k12.de.us
Delaware Attorney General
Consumer Protection Wilmington: 820 N. French
Street 5th floor
Wilmington, DE 19801
consumer.protection@state.de.us
District of Columbia
District of Columbia, Office of the State
Superintendent of Education
Higher Education Licensure Commission
810 First Street, NE, 2nd Floor
Washington, DC 20002
http://osse.dc.gov/service/education-licensure-
commission-elc-public-complaints
Florida
Florida Commission for Independent Education
325 W. Gaines Street, Suite 1414
Tallahassee, FL 32399-0400
http://www.fldoe.org/policy/cie/file-a-complaint.
stm
Georgia
Georgia Nonpublic Postsecondary Education Commission
2082 E Exchange PI. \#220
Tucker, GA 30084-5334
http://gnpec.org/consumer-resources/
Hawaii
Hawaii Postsecondary Education Authorization
Program
P.O. Box 541

Honolulu, Hawaii 96809
hpeap@dcca.hawaii.gov
http://cca.hawaii.gov/hpeap/student-complaintprocess/

Idaho
Idaho State Board of Education
Attn: State Coordinator for Private Colleges and
Proprietary Schools
650 West State Street
P.O. Box 83720

Boise, ID 83720-0037
Illinois
Illinois Board of Higher Education
431 East Adams, 2nd Floor
Springfield, Illinois 62701-1404
info@ibhe.org
Institutional Complaint Hotline: (217) 557-7359 Indiana

* Syracuse University is authorized by:

The Indiana Board for Proprietary Education
101, W. Ohio St., Suite 670, Indianapolis, IN 46204-1984

Indiana Board for Proprietary Education
Attn: Director of Regulatory Compliance
302 W Washington Street, Room E201
Indianapolis, IN 46204
http://www.in.gov/che/2744.htm
lowa
Iowa Student Aid Commission
450 E. Grand Ave., 3rd Floor
Des Moines, IA 50309
info@iowacollegeaid.gov
https://www.iowacollegeaid.gov/content/
constituent-request-review
Kansas
Kansas Board of Regents
1000 SW Jackson Street, Suite 520
Topeka, KS 66612-1368
http://www.kansasregents.org/state_university_ student_complaint_form
Kentucky
Kentucky Council on Postsecondary Education
1024 Capital Center Dr. \#320
Frankfort, KY 40601-7512

Sarah.levy@ky.gov
Office of the Attorney General Capitol Suite 118, 700 Capitol Avenue Frankfort, KY 40601-3449
consumer.protection@ag.ky.gov http://ag.ky.gov/civil/consumerprotection/ complaints/Pages/default.aspx
Louisiana
Louisiana Board of Regents
Attn: Nancy Beall or Dr. Larry Trembly
P.O. Box 3677

Baton Rouge, LA 70821-3677
http://www.regentsfiles.org/assets/docs/
ProprietarySchools/StudentComplaintProcedure.
pdf
(225) 342-4253 (225) 342-9318

## Maine

Maine Department of Education
Anita Bernhardt - Complaints
23 State House Station
Augusta, ME 04333-0023
Maine Attorney General
Consumer Protection Division
6 State House Station
Augusta, ME 04333
http://www.maine.gov/ag/consumer/complaints/ complaint_form.shtml

## Maryland

* Syracuse University has registered certain of its distance education programs with the Maryland Higher Education Commission. Renewal, including additional programs, is in process.

Maryland Higher Education Commission
6 North Liberty Street, 10th Floor
Baltimore, MD 21201
(410) 767-3388
http://www.mhec.state.md.us/higherEd/acadAff/
MHECStudentComplaintProcess.pdf
Office of the Attorney General, Consumer
Protection Division
200 St. Paul Place
Baltimore, MD 21202
Consumer Protection Hotline: (410) 528-8662
consumer@oag.state.md.us
http://www.oag.state.md.us/Consumer/
complaint.htm
Massachusetts
Massachusetts Board of Higher Education
One Ashburton Place, Room 1401
Boston, MA 02108
http://www.mass.edu/forstudents/complaints/ complaintprocess.asp
Michigan
Michigan Department of Licensing and Regulatory Affairs
Bureau of Commercial Services, Licensing Division
Proprietary School Unit Staff

## UNDERGRADUATE COURSE CATALOG

201 N. Washington Sq.
Lansing, MI 48913
http://www.michigan.gov/lara/0,4601,7-154-
35299_61343_35395_35396---,00.html
Minnesota

* Syracuse University is registered as a private institution with the Minnesota Office of Higher Education pursuant to sections 136A. 61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

Minnesota Office of Higher Education
1450 Energy Park Drive, Suite 350
St. Paul, MN 55108-5227
http://www.ohe.state.mn.us/mPg.
cfm? pagelD=1078
Mississippi
Mississippi Commission on College Accreditation 3825 Ridgewood Road
Jackson, MS 39211-6453
http://www.mississippi.edu/mcca/downloads/
studentcomplaintform.pdf
Consumer Protection Division, Office of the Attorney General
PO Box 22947
Jackson, MS 39225-2947
http://www.ago.state.ms.us/index.php/contact (email)
http://www.ago.state.ms.us/forms/complaintform/

Missouri
Missouri Department of Higher Education
205 Jefferson Street, PO Box 1469
Jefferson City, M0 65102-1469
info@dhe.mo.gov
Policy: http://dhe.mo.gov/documents/
POLICYONCOMPLAINTRESOLUTION-reviseddraft.
pdf
Montana
Montana Board of Regents
Office of Commissioner of Higher Education,
Montana University System
2500 Broadway Street
PO Box 203201
Helena, MT 59620-3201
Montana Office of Consumer Protection
2225 11th Avenue
PO Box 200151
Helena, MT 59620-0151
contactocp@mt.gov
http://mus.edu/MUS-Statement-of-Complaint-
Process.asp
Nebraska
Nebraska Coordinating Commission for Postsecondary Education
PO Box 95005
Lincoln, NE 68509-5005

Nebraska Attorney General, Consumer Protection
Division
2115 State Capitol
Lincoln, NE 68509
http://ago.nebraska.gov/forms/consumer_ complaint

Consumer Protection Hotline: (800) 727-6432
Nevada
Nevada Commission on Post-secondary Education
8778 S Maryland Parkway, Suite 115
Las Vegas, NV 89123
http://www.cpe.state.nv.us/CPE\ 
Complaint\%20Info.htm
New Hampshire
Patricia Edes
New Hampshire Postsecondary Education
Commission
101 Pleasant Street
Concord, NH 03301
Patricia.Edes@doe.nh.gov
603-271-0257
New Jersey
New Jersey Higher Education
PO Box 542
Trenton, NJ 08625
nj_che@che.state.nj.us
New Jersey Division of Consumer Affairs
124 Halsey Street,
New Jersey 07102
http://www.nj.gov/oag/ca/complaint/ocp.pdf
New Mexico
New Mexico Higher Education Department 2048 Galisteo
Santa Fe, NM 87505
http://hed.state.nm.us/uploads/files/PPS/
Overview/Complaint\%20Form\%20FY2014.doc
New York
New York Office of College and University Evaluation
New York State Education Department
5 North Mezzanine
Albany, NY 12234
ocueinfo@mail.nysed.gov
http://www.highered.nysed.gov/ocue/spr/
COMPLAINTFORMINFO.htmI
North Carolina
Postsecondary Education Complaints c/o Assistant Director of Licensure and Workforce University of North Carolina General
Administration
910 Raleigh Road
Chapel Hill, NC 27515
919-962-4558
studentcomplaint@northcarolina.edu
North Dakota
North Dakota Department of Career and Technical

Education
State Capitol - 15th Floor
600 E. Boulevard Ave. Dept. 270
Bismarck, ND 58505-0610
cte@nd.gov
Ohio
Ohio Board of Regents
25 South Front Street
Columbus, OH 43215-4183
Ohio Attorney General, Consumer Protection Section
30 E. Broad St., 14th floor
Columbus, OH 43215-3400
http://www.ohioattorneygeneral.gov/Individuals-
and-Families/Consumers/File-A-Complaint.aspx
Oklahoma
Oklahoma State Regents for Higher Education
655 Research Parkway, Suite 200
Oklahoma City, OK 73104
http://www.okhighered.org/current-college-
students/complaints.shtml
Oklahoma Office of the Attorney General,
Consumer Protection Unit
Attn: Investigative Analyst
313 NE 21st Street
Oklahoma City, OK 73105
http://www.oag.state.ok.us/oagweb.nsf/ccomp.
html
Oregon
Oregon Higher Education Coordinating
Commission
Office of Degree Authorization
775 Court Street NE, Salem, OR 97301
Oregon Attorney General
Financial Fraud/Consumer Protection Section
1162 Court St. NE
Salem, OR 97301-4096
http://www.doj.state.or.us/consumer/pdf/
consumer_complaint.pdf
Pennsylvania
Pennsylvania Department of Education
333 Market Street
Harrisburg, PA 17126-0333
http://www.education.state.pa.us/portal/
server.pt/community/higher_education/8711/
complaint_procedure/1004474
Office of Attorney General, Bureau of Consumer
Protection 14th Floor, Strawberry Square,
Harrisburg, PA 17120
https://www.attorneygeneral.gov/Quick_Links/
Pennsylvania_Attorney_General_Complaint_
Forms/
Rhode Island
Rhode Island Board of Governors for Higher Education
Shepard Building, 80 Washington Street
Providence, RI 02903

Rhode Island Department of Attorney General,
Consumer Protection Unit
150 South Main Street
Providence, RI 02903
http://www.riag.ri.gov/home/
ConsumerComplaintForm.pdf
South Carolina
South Carolina Commission on Higher Education 1122 Lady St., Suite 300
Columbia, SC 29201
803-737-3918
http://www.che.sc.gov/CHE_Docs/
AcademicAffairs/License/Complaint_procedures_ and_form.pdf
South Dakota
South Dakota Secretary of State Jason M. Gant
State Capitol, 500 East Capitol Avenue
Pierre, SD 57501-5070
sdsos@state.sd.us
South Dakota Office of Attorney General
Division of Consumer Protection
1302 E Hwy 14 Suite 3
Pierre SD 57501-8053
http://atg.sd.gov/Consumers/
HandlingComplaints/ConsumerComplaintForm. aspx

Tennessee
Tennessee Higher Education Commission 404 James Robertson Parkway, Suite 1900 Nashville, TN 37243
http://www.tn.gov/thec/Divisions/LRA/
PostsecondaryAuth/Complaint\%20Form.rtf
Texas

* Syracuse University is not regulated in Texas
under Chapter 132 of the Texas Education Code.
Texas Higher Education Coordinating Board
1200 E. Anderson Lane
Austin, TX 78752
http://www.thecb.state.tx.us/index.
cfm?objectid=051F93F5-03D4-9CCE-
40FA9F46F2CD3C9D
Title 19 of the Texas Administrative Code, Sections 1.110 1.120:
http://info.sos.state.tx.us/pls/pub/readtac\$ext. ViewTAC?tac_view=5\&ti=19\&pt=1\&ch=1\&sch= E\&rl=Y

Office of the Attorney General, Consumer
Protection Division
PO Box 12548
Austin, TX 78711-2548
https://www.oag.state.tx.us/consumer/
complaintform.pdf
Utah
Utah Division of Consumer Protection
160 East 300 South
Salt Lake City, Utah 84111
consumerprotection@utah.gov
http://consumerprotection.utah.gov/complaints/ index.htm I

Vermont
Vermont Agency of Education, State Board of Education
120 State Street
Montpelier, VT 05620-2501
AOE.EdInfo@state.vt.us
Vermont Attorney General's Office
109 State Street
Montpelier, VT 05609-1001
Virginia
State Council of Higher Education for Virginia
101 N. 14TH St.
James Monroe Building
Richmond, VA 23219
communications@schev.edu
http://www.schev.edu/students/
studentcomplaint.asp
Washington
Washington Student Achievement Council
917 Lakeridge Way
PO Box 43430
Olympia, WA 98504-3430
dainfo@hecb.wa.gov
http://wsac.wa.gov/protecting-educationconsumers

West Virginia
West Virginia Higher Education Policy Commission 1018 Kanawha Blvd E., Suite 700
Charleston, WV 25301-2800
West Virginia Office of the Attorney General, Consumer Protection Division
PO Box 1789
Charleston, WV 25326-1789
See also: https://www.wvhepc.org/resources/ Complaint_Process.pdf

## Wisconsin

Wisconsin Educational Approval Board
201 W. Washington Avenue, 3rd Floor
PO Box 8696
Madison, WI 53708
eabmail@eab.wisconsin.gov
http://eab.state.wi.us/resources/complaint.asp
Wyoming
Wyoming Department of Education
2300 Capitol Avenue, Hathaway Building, 2nd
Floor
Cheyenne, WY 82002-0050
http://edu.wyoming.gov/downloads/schools/
student-complaint-process.pdf
Attorney General's Office
123 Capitol Building, 200 W. 24th Street
Cheyenne, WY 82002
Puerto Rico
Puerto Rico Council on Higher Education

PO Box 1900
San Juan, PR 00910-1900
Puerto Rico Department of Justice
PO Box 9020192
San Juan, Puerto Rico 00902-0192

## Nondiscrimination and EEO Policy

The University does not discriminate on any protected basis. This includes in admission, treatment, or access to its programs or activities or in employment in its programs and activities. The University prohibits harassment or discrimination related to any protected category. The protected bases include creed, ethnic or national origin, sex, gender, pregnancy, disability, marital status, political or social affiliation, age, race, color, veteran status, military status, religion, sexual orientation, domestic violence status, gender identity, gender expression or perceived gender. Any complaint of discrimination or harassment related to any of these protected bases should be reported to the University's Chief Equal Opportunity, Inclusion and Resolution Services Officer, Cynthia Maxwell Curtin. She is responsible for coordinating compliance efforts under the various laws including Titles VI, IX and Section 504* of the Rehabilitation Act. She can be contacted at Equal Opportunity, Inclusion and Resolution Services, 005 Steele Hall, Syracuse University, Syracuse, NY 13244-1520; OR by email: cmcurtin@syr.edu; or by telephone: 315-443-4018.

Consistent with both federal and state laws, in general, no individual who is otherwise qualified shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity, solely by reason of having a disability. If a student needs accommodations for a disability, please contact the Office of Disability Services (ODS), http:// disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment. ODS is responsible for coordinating disabilityrelated accommodations for students and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Additional information is available at http://www.syr.edu/accessiblesu/index.html.

Consistent with Title IX, the University's prohibits harassment, domestic or dating violence rape, sexual assault, domestic or dating violence, stalking, sexual coercion and non-contact sexual abuse such as voyeurism, and sexual exploitation or other forms of sexual violence or nonconsensual sexual activity. The University's standard for consent means informed, sober, mutual, and expressed by action and words. If
you or someone you know has been harassed or assaulted, privileged and confidential advocacy and supportive services are available by calling the Sexual and Relationship Violence Response Team of licensed professionals at 315-4434715, 200 Walnut Place. Additional information is available at http://www.syr.edu/hcd/equalopportunity.html or by calling the Title IX hotline: 315-443-0211.
*Title IX prohibits harassment or discrimination based on sex, gender, sexual orientation, gender expression, or gender identity and is enforced by the Office for Civil Rights [OCR@ed.gov; 800-421-3481]. Titles VI and VII prohibit harassment or discrimination based on race, national origin, or color. Sections 503 and 504 of the federal Rehabilitation Act and the Americans with Disabilities Act prohibit discrimination or harassment because of disability. In addition, New York law prohibits discrimination or harassment based on these and other protected categories.

## Campus Safety

It is Syracuse University's policy to provide anyone, on request, with a printed copy of the University's policies and procedures regarding campus security and safety, as well as crime rates and statistics for the most recent threeyear period. A copy of Your Safety and Security at Syracuse University, a handbook that provides this information, is available from DPS. The handbook is updated annually.
The Syracuse University Department of Public Safety will provide upon request all campus crime statistics as reported to the United States Department of Education.

US DOE website: http://ope.ed.gov/security/

## Academic Rules

This is the official version of the general academic rules of Syracuse University (SU) effective for the 2014-2015 academic year. The rules are presented alphabetically by topic, reflecting distinctions between undergraduate and graduate rules as appropriate. Both undergraduate and graduate students will find that their individual school/college/department has additional rules that apply. In the case of graduate students, these rules may be more restrictive than the general University rule.

## Additional Sources for Information

There are a number of other sources for information and rules that are important for
students. They include, but are not limited to, the following:

Financial Aid Home
Student Handbook
SU Abroad
Tuition, Fees \& Related Policies
Also see school, college, and academic department materials and websites.

## Academic Integrity

At Syracuse University, academic integrity is expected of every community member in all endeavors. Academic integrity includes a commitment to the values of honesty, trustworthiness, fairness, and respect. These values are essential to the overall success of an academic society. In addition, each member of the university community has a right to expect the highest standards of academic integrity from all other community members. An individual's academic dishonesty threatens and undermines the central mission of the University. It is unfair to other community members who do not cheat, because it devalues efforts to learn, to teach, and to conduct research. Academic dishonesty interferes with moral and intellectual development, and poisons the atmosphere of open and trusting intellectual discourse. Syracuse University's academic integrity policy and procedures are administered by the Academic Integrity Office in the Division of Academic Affairs, and all schools and colleges (see supplemental policy and procedures for the College of Law).

## Academic Integrity Expectations

Academic integrity is violated by any dishonest act which is committed in an academic context including, but not limited to the following:

Use of Sources Plagiarism is the use of someone else's language, ideas, information, or original material without acknowledging the source. Examples of plagiarism:

1. Paper is downloaded from an Internet source and/or obtained from a paper mill.
2. Paper contains part or all of the writings of another person (including another student), copied without citation.
3. Paper contains passages that were cut and pasted from an Internet source, without citation.

While students are responsible for knowing how to quote from, paraphrase, and cite sources correctly, the ability to apply that information in all writing situations is an advanced literacy skill acquired over time through repeated practice. When a student has attempted to acknowledge
sources but has not done so fully or completely, the instructor may determine that the issue is misuse of sources or bad writing, rather than plagiarism. Factors that may be relevant to the determination between misuse of sources and plagiarism include prior academic integrity education at Syracuse University, and the program level of the student.

## Course Work and Research

1. The use or attempted use of unauthorized aids in examinations or other academic exercises submitted for evaluation;
2. Fabrication, falsification, or misrepresentation of data, results, sources for papers or reports; in clinical practice, as in reporting experiments, measurements, statistical analyses, tests, or other studies never performed; manipulating or altering data or other manifestations of research to achieve a desired result; selective reporting, including the deliberate suppression of conflicting or unwanted data;
3. Copying from another student's work;
4. Actions that destroy or alter the work of another student;
5. Unauthorized cooperation in completing assignments or examinations;
6. Submission of the same written work in more than one course without prior written approval from both instructors.

## Communications

1. Violating the confidentiality of an academic integrity investigation, resolution, or documentation;
2. Making a false report of academic dishonesty;
3. Dishonesty in requests for make-up exams, for extensions of deadlines for submitting papers, or in any other matter relating to a course.

## Representations and Materials Misuse

1. Falsification of records, reports, or documents associated with the educational process;
2. Misrepresentation of one's own or another's identity for academic purposes;
3. Misrepresentation of material facts or circumstances in relation to examinations, papers, or other academic activities;
4. Sale of papers, essays, or research for fraudulent use;
5. Alteration or falsification of University records;
6. Unauthorized use of University academic facilities or equipment, including computer accounts and files;
7. Unauthorized recording, sale, purchase, or use of academic lectures, academic computer software, or other instructional materials;
8. Expropriation or abuse of ideas and preliminary data obtained during the process of editorial or peer review of work submitted to journals, or in proposals for funding by agency panels or by internal University committees;
9. Expropriation and/or inappropriate dissemination of personally-identifying human subject data;
10. Unauthorized removal, mutilation, or deliberate concealment of materials in University libraries, media, laboratories, or academic resource centers.

## Course-Specific Expectations

1. The instructor of record is responsible for determining and communicating coursespecific academic integrity expectations. Instructors of record are responsible for stating, in writing, course-specific expectations, particularly those regarding use of sources and collaboration.
2. Students are responsible for consulting their instructors for any clarification needed on academic integrity standards, including those set forth in this policy and those that are course-specific.
3. Collusion is assisting or attempting to assist another in an act of academic dishonesty. Collusion is distinct from collaborative learning, which may be a valuable component of
scholarly development. Acceptable levels of collaboration vary in different courses, and students are expected to consult with their instructor if they are uncertain whether their cooperative activities are acceptable.

## Transcript Notation

When an " $F$ " grade for course failure is imposed for an academic integrity violation, the grade on the transcript will be marked with the notation "( X$)$." The failing grade is counted toward the GPA. If the "( X )" notation is applied for a first violation, it will be removed only upon the student's completion of an educational program and full compliance with all consequences associated with the violation. After the " $(X)$ " notation is removed, the student may petition to flag the failing grade. If the " $(\mathrm{X})$ " is applied for a subsequent violation, the notation will be permanently retained on the transcript.

Academic integrity violations that do not involve course work may also be noted on a student's transcript. Such violations appear on the transcript as "Academic Integrity Sanction" with the date the sanction was imposed. If the sanction is applied for a first violation, it will be removed only upon the student's completion of an educational program and full compliance with all consequences associated with the violation. If the sanction is a applied for a subsequent violation, it will be permanently retained on the transcript.

## Academic Renewal

## Undergraduate Students

Undergraduates who are readmitted or admitted (for previously non-matriculated students) to SU with a cumulative GPA of less than 2.0 may apply for academic renewal, if returning after an absence of seven years ( 14 full fall and spring semesters). Before applying for academic renewal:

- discuss academic consequences with an advisor in your school/college
- if you are receiving or plan to apply for financial aid, discuss the process of academic renewal with a financial aid counselor

During the first semester of your re-admission or admission, complete a contract with your school/ college no later than the midterm date of that semester, as published in the academic calendar

- Schools/colleges will review main campus students' academic renewal requests at the end of the first semester. Unless otherwise noted in the table below, a minimum semester GPA of 2.5 is required for a full-time course load with no I, F, NA, P, V, WD, or missing grades.
- University College students must complete 12 credits within two years (four consecutive fall and spring semesters) and must have attained a minimum cumulative GPA of 2.5 , with no I, F, NA, P, V, WD, or missing grades.

There will be no selective review of only certain courses for flagging. If you do not meet your school's/college's requirements for academic renewal at the time of review, you may not petition again.

## School/College Rules

| Education | A GPA of 3.0 is required for the first semester (full-time students) or first 12 credits (University College students). |
| :--- | :--- |
| Public Communication | Only students who have attempted no more than 30 credits or the equivalent of two full semesters may apply for academic <br> renewal. |
| Sport and Human Dynamics | A GPA of 3.0 is required for the first semester (full-time students) or first 12 credits (University College students). |
| Visual and Performing Arts | A 2.8 GPA is required for the first semester (full-time students) or first 12 credits (University College students). |

## Academic Renewal and the Transcript

If academic renewal is approved, your GPA will be reset to 0.00 , and the GPA calculation will resume with the courses you take after readmission or admission. The courses you took before academic renewal will still appear on your transcript, but will be flagged (see Flagging) to remove them from all credit and grade calculations. The notation "(ar)" will reflect that flagging was done under the academic renewal policy. Your prior coursework will be evaluated in the same manner as transfer credit. Only prior coursework with a grade of C or higher (no C-, D, or F grades) that can be applied
toward your degree program will be accepted as a block of credits from your prior record. Grades in these courses will not calculate toward your GPA. If you subsequently transfer to another SU school/ college, prior coursework will be re-evaluated.

If you elect academic renewal, then to be considered for University honors at graduation you must complete 60 credits of SU letter-graded courses that can be calculated in your GPA.

## Academic Standing

 Minimum GPA to Continue Graduate WorkGraduate Students

Graduate students must earn at least a 2.8 cumulative GPA in the first 30 credits of graduate study at Syracuse University. The academic unit may cancel matriculation if this requirement is not met.

## Class Standing

Undergraduate Students
Class standing is determined by the number of SU-earned credits, plus credits accepted for transfer credit and other types of external credit, e.g., AP examination. Class standing is calculated as follows:

| Class | Total Cumulative Credits |
| :--- | :--- |
| Freshman | $0-23$ |
| Sophomore | $24-53$ |
| Junior | $54-83$ |
| Senior | 84 and above |

## Academic Probation

Any student who has a cumulative GPA of less than 2.0 and for whom a more serious action is not appropriate may be placed on probation You may also be placed on probation if your semester GPA falls below 2.0 , or if you fail to meet other criteria for good academic standing as established by your school/college. Each school/college reviews its students' records and determines the appropriate probation actions to be applied from the categories listed below. School/college offices can provide more detailed information about academic policies. If you are under any academic probation your financial aid may be impacted.

Schools/colleges send probation letters that explain the reason for the action, such as low cumulative GPA or number of Incompletes,
and specify the conditions under which good academic standing can be regained.

The probation categories are described below and include College Probation; Probation, OneSemester Trial; and Academic Suspension.
Schools/colleges may:

- apply any one of the categories at any time, depending on school/college policy and individual student records; categories are not necessarily applied sequentially
- apply an action more than once to the same student


## College Probation

This action applies to a student who has a cumulative average above 2.0, but who fails to meet other school/college criteria for good standing. These criteria include the following:

## School/College Rules

| Architecture | Term GPA less than 2.0, a term of architecture courses below 2.0, more than 12 credit hours of Incomplete or NA grades, fewer than 24 credit hours completed in a 12-month period, or insufficient progress toward degree. |
| :---: | :---: |
| Arts and Sciences | Students earning less than a 2.0 semester GPA will be placed on Academic Warning for the following semester. Students who earn less than a 2.0 semester GPA a second time will be placed on Academic Probation. And if they earn less than a 2.0 semester GPA for a third time, they will be placed on Final Probation and they may possibly be suspended from college. |
| Education | Excessive number of Incompletes, missing grades, and/or limited progress toward degree, and/or students at or below a 2.0 cumulative GPA may be placed on a one-term trial (0TT) at any point in time. Inclusive early childhood special education, inclusive elementary special education: English education, science education, mathematics education, social studies education, Spanish education, art education, music education, physical education, and health and physical education: cumulative, content, or education course GPA of less than 3.0; Health and exercise science: cumulative or major course GPA below 3.0. Selected studies in education: cumulative GPA below 2.8. Guidelines are published in the School of Education Undergraduate Handbook. |
| Engineering and Computer Science | Term or cumulative GPA less than 2.0. Less than 2.0 Mathematics, Science and ECS course GPA (IST courses for SIS majors). Completion of less than 12 credits hours in one semester or 24 credits hours within any 12 -month period. Failure to complete at least 6 credits and term GPA less than 1.5 , will result in immediate suspension. Failure to complete calculus sequence by the end of the sophomore year (MAT 295, 296, \& 397) (Does not apply to SIS majors). In addition to the above conditions, computer science students only: GPA of less than 2.667 in core courses. Failure to maintain satisfactory progress toward your degree. |
| Information Studies | Excessive missing grades, Incompletes, failure to make normal progress, or failure to complete prerequisites for the following semester's registration. <br> Must maintain IST GPA of 2.5 or higher to be certified for graduation. |
| Management | Semester GPA less than 2.0, earning fewer than 12 credit hours in two consecutive semesters, or failure to meet adequate progress standards. <br> Students can also be placed on college probation or academically suspended for taking a Leave of Absence after the drop deadline (resulting in all WD, I, or Failing grades). |
| Public Communications | GPA of less than 2.0 in Public Communications courses, or excessive missing grades or Incompletes, or semester GPA below 2.0 for two consecutive semesters, or failure to make normal progress toward a degree. |
| Sport and Human Dynamics | Students with one or more of the following conditions will be placed on academic probation: semester and/or cumulative GPA below 2.0; excessive number of Incomplete, NA, or missing grades; lack of progress toward degree. |
| University College | B.P.S students: Semester or cumulative GPA less than 2.0; excessive number of Incompletes, NA, or missing grades. |
| Visual and Performing Arts | Semester GPA below 2.0 with cumulative GPA above 2.0; or excessive NAs, Incompletes, or other failure to make normal progress toward a degree. |

## Probation, One-Semester Trial

If your school/college determines that you have serious deficiencies in progress toward your degree requirements, usually including a cumulative GPA below 2.0, the school/college
may impose a one-semester trial specifying that certain requirements be met by the end of the term. Failing to meet these requirements may result in suspension. Each school/college's standards are available at the school/college undergraduate office.

## Ineligible to Continue

If your school/college sets specific conditions for continuing registration, this action may be applied to cancel early registration and/or prevent participation in registration for new coursework
until the requirements are met. It may also apply in situations where full-time status is no longer allowed, but part-time status is permitted. A student who is ineligible to continue may have a GPA either above or below 2.0.

## Academic Suspension

Academically suspended students are officially withdrawn from the University. Students face academic suspension for failing to meet the conditions established by any previous probation action or for seriously departing from standards required for good standing. GPA may be either above or below 2.0 at the time of suspension. If a suspension action is taken, the school/college will send a letter:

- specifying the reason for the action
- explaining appeal procedures

The next semester's registration will be cancelled or prevented, and future semester registrations won't be allowed unless:

- you have successfully appealed your suspension; or
- you have been accepted to a new school/ college as an internal transfer; or
you have been readmitted to the school/ college that suspended you (See Leave of Absence, Withdrawal, and Readmission).


## Advanced Credit Examinations

Advanced Credit (AC) examinations provide matriculated students the opportunity to be tested on, and to receive credit for, knowledge and skills already achieved that would be covered by regular SU courses. You must petition the appropriate academic department for approval to take an AC exam; the department is under no obligation to approve the request. The exams are administered and graded by faculty. Each Advanced Credit exam carries a fee, at an amount published each year in Tuition, Fees, and Related Policies. For undergraduates, your school/college may accept a maximum of 30 semester hours from a combination of SU Advanced Credit exams and any other credit (e.g., AP exams, experiential learning). Advanced Credit exams

- must be associated with SU course subjects and numbers
- are not appropriate for all courses, such as Selected Topics and those that require a Proposal for Independent Study
- may not be applied to the residency requirement (see Residency Requirement)
- may not be taken in a course for which credit was already earned
are not considered as retaken courses for flagging purposes [see Flagging (Removing courses from calculation toward the degree and GPA)]
- will be removed from the official transcript if an equivalent course is subsequently taken at SU and passed
- are recorded on the transcript by credit hours and grade, and contribute to total credit hours earned and cumulative degree GPA


## Graduate Students

Graduate students who wish to obtain credit toward advanced degrees for knowledge in a field essential to their programs of study but acquired by means that preclude formal transfer to SU may petition for an Advanced Credit examination in a course or courses covering the relevant area of study. The petition requesting an Advanced Credit examination must state the basis for the belief that the student has attained competence at the graduate level in the specified academic area and be accompanied by a statement from the student's department supporting the petition and accepting responsibility for preparing and administering the examination. The minimum passing grade for a graduate $A C$ Exam is $B$.

## Undergraduate Students

Approval of your academic advisor, the appropriate department chair, and your home school/college is required in order to take an Advanced Credit examination. You must earn a grade of $C$ or higher to pass the exam. $A C$ exams count toward the 30 semester hours maximum credits that will be accepted from a combination of AC exams, experiential learning, extra-institutional credit, and external examination programs toward your total number of credits required for graduation.

## Attendance in Classes

Attendance in classes is expected in all courses at SU. Class attendance requirements and policies concerning nonattendance are established by the instructor(s) of each class. Students are expected to arrive on campus in sufficient time to attend starting with the first meeting of all registered classes. Students who do not arrive and attend classes starting on the first day of their classes may be academically withdrawn by their college or departments as not making progress toward degree by failure to attend.

## Competency and Proficiency Examinations

Advanced standing, exemption, or placement examinations may be given by certain departments, e.g., mathematics; English; and languages, literatures, and linguistics, to determine where students should be placed in a certain sequence of courses.

No credit is given for these examinations, and no requirements are waived by successfully completing placement or advanced standing examinations. You may, however, be excused from prerequisite courses on the basis of these examinations.

## Consortium Agreements

SU has formal consortia arrangements through SU Abroad, the Consortium for Culture and Medicine, and the Graduate Scholar Exchange Program. Except for these, SU does not allow students to enroll at other institutions under an individual consortium arrangement, nor does it award financial aid to students who choose to enroll at other institutions, e.g., while on a leave of absence.

If you are a matriculated SU student who wants to study abroad through a program not directly administered or sponsored by SU Abroad, contact the SU Abroad office at least three months before the start of the program to request consideration for a consortium agreement, which is required if you want to have the classes you take abroad count toward your degree program and continue to receive financial aid during your overseas program.
If approved for a consortium agreement, credit earned through such programs is generally treated as SU credit. Your school/college and/ or department will determine acceptable courses and how they will be applied.

## Courses

Course Numbering
System

| Remedial, developmental, and <br> noncredit courses | $000-009$ |
| :--- | :--- |
| Freshman-level courses | $100-199$ |
| Sophomore-level courses | $200-299$ |
| Junior- and senior-level courses | $300-499$ |


| Joint undergraduate-and graduate- <br> level courses | $500-599$ |
| :--- | :--- |
| First-year graduate-level courses | $600-699$ |
| Second- and third-year graduate- <br> level courses | $700-899$ |
| Readings, research, and individual <br> study courses at the doctoral level <br> only | $900-996$ |
| Master's thesis | 997 |
| Individualized study at the gradu- <br> ate level | 998 |
| Doctoral dissertation | 999 |

Refer to the Guide to Reading Course Descriptions section of the course catalog for further explanation.

## Credit

The unit of credit at SU is the semester hour. Each semester hour represents one class period of 50 minutes per week for 15 weeks, or the equivalent. Laboratory or field courses require a minimum of two or three class periods a week for each credit hour.

This section of the Academic Rules describes certain options for credit that may apply toward some students' degree and certificate programs. Transfer credit, experiential learning, external exams, and restricted graduate credit are among the examples described below. See the Course Catalog and confer with your academic advisor for a complete overview of credit requirements needed to fulfill your degree or certificate requirements.

## Restricted Graduate Credit

Restricted graduate credit is credit earned at the graduate level by students who aren't matriculated in a graduate program. Restricted credit must be converted to graduate credit in order to be included in a graduate degree or certificate program. All coursework taken as a non-matriculated student automatically calculates toward the graduate GPA unless a petition to flag the courses is submitted to and approved by the department chair of student's program, after
matriculation in a degree or certificate program.

## Conversion to Graduate Credit

You may apply to have up to 12 credits of restricted graduate credit converted to graduate credit if you meet all of the following conditions:

- you become matriculated in a graduate degree or certificate program
- your overall average in all SU graduate work is at least 2.8
- you earned a B or better in each course
- your courses are part of a degree or certificate program approved by your department
- you have completed your coursework within the time limit allowed for the degree

Restricted graduate credit earned during the term in which you become matriculated in the Graduate School is converted automatically to graduate credit.

## School/College Rules

| Education | In the higher education degree program, no more than six hours of restricted graduate credit may be converted to graduate credit. In all <br> other graduate degree programs, no more than nine hours of restricted graduate credit may be converted to graduate credit. |
| :--- | :--- |
| Management | No more than six credits of restricted credit may be converted to graduate credit. |

## Counting Credits Towards Multiple Degrees and/or Programs

NYSED limits the counting of credits toward multiple degrees and/or programs to protect the academic integrity of each degree and/ or program. When a student is counting credits towards multiple degrees and/or programs, in the same or closely related field(s) and the coursework makes up an integral part of the degrees and/or programs, the following restrictions apply:

1. You must be admitted to the degree program in each of the awarding academic units.
2. In no instance shall course credit be counted more than twice in satisfaction of the requirements for multiple degrees and/or programs.
3. In order to earn two or more degrees and/or programs (including Certificates of Advanced Study (C.A.S)), you must earn a minimum of 80 percent of the combined total of SU credits normally required for each of the degrees. However, in cases where the C.A.S. curriculum is embedded within another degree program, credit from the C.A.S. may be counted in its entirety for the C.A.S. and other degree.

Similarly, if the Master's curriculum is in the same field as the doctoral degree, the credits for the Master's degree may be counted in their entirety towards the doctoral degree.

## Exceptions

Two 12-credit C.A.S.s may not be awarded for less than 21 credits (i.e. only one three credit course can be shared between the two C.A.S.s).

Two 30-credit Master's degrees will not be awarded for fewer than 51 credits (i.e. up to nine credits can be shared between the two Master's degrees).
Three 30-credit Master's degrees will not be awarded for fewer than 75 credits.

Note: These restrictions do not apply to joint/dual programs with the College of Law or the Master of Philosophy degrees.

SUNY College of Environmental Science and Forestry and SU concurrent study: SU and SUNY ESF have agreements that encourage concurrent master's study in environmental science and forestry with SU degree work in public communications, law, management, public administration, and certain education programs. Other SU fields may also qualify. Contact your school/college, the Graduate School and SUNY ESF for specific requirements and procedures regarding concurrent degree work and counting of credits.

## Undergraduate and Graduate Coursework

## Undergraduate Students

If you are an undergraduate (matriculated or nonmatriculated) who would like to take graduatelevel courses at SU that would apply toward a future SU graduate degree or certificate program, you must petition to register for these courses. Such courses will earn "restricted graduate credit" until you register as a matriculated SU graduate student.

After you matriculate, and with approval of a petition, the graduate credits earned while an undergraduate will be transferred into your graduate record, subject to the conversion to graduate credit rules, as a block of credit hours. These credits will not be applied toward the SU undergraduate degree. They will be flagged on the undergraduate section of the transcript and removed from calculations there. Under no circumstances will grades earned in these flagged courses calculate in either the undergraduate or graduate GPA.

No credit that is applied to the undergraduate degree may be applied also to the graduate degree, unless such double-counting falls under the explicit articulation of a combined bachelor's
and master's degree program that has been approved by and registered with NYSED. Credit applied to an undergraduate major or minor may only be shared with one other major or minor. Credit may not be triple counted.

## Calculation of Credit Hours

The following calculate toward cumulative credit and grade totals on your academic transcript:

- letter grades and Incompletes
- a course in which a "Pass (P)" was earned is included in total earned credits but not grade point calculations

Calculations made by schools/colleges to determine progress toward degree requirements may exclude courses appearing on your transcript that are not applicable to the specific degree program. As noted under the flagging rules, courses may be removed from calculation under certain circumstances.

## Undergraduate Students

With the approval of your home school/college, you may apply as free elective credit up to six credit hours of college-level remedial and developmental courses (numbered 000-099) in which a passing grade was earned toward your degree requirements.

## Flagging (Removing Courses from GPA, Credit and Degree Calculation)

When certain requirements are met, courses may be "flagged," which excludes them from GPA and semester and cumulative credit hour totals. The flag symbol is noted on the official transcript. Flagging a course may affect financial aid eligibility e.g., flagging a course in which a passing grade was earned may alter the calculation of satisfactory progress. For additional information, see your financial aid counselor.
Once your degree has been awarded, you may not request to flag courses taken before the degree date.

## Flagging Courses That Have Been Retaken

To qualify for flagging, both the original and subsequent course must be taken at SU and have the same course subject and number. A school/ college may prohibit you from flagging a lower level course after you have completed with a passing grade a higher level course in the same subject.

If a course is no longer offered under the same subject and/or number, you may petition the school/college in advance to retake the course most nearly equivalent in content and level. Certification by the academic department that the course is a close equivalent--not just a substitution for the degree requirement--is required.

Except as noted in TABLE A, only the credits and grade received in the second course will count.

- Both the original course and the retaken course remain on your transcript.
- A course is repeatable if it may be retaken and counted more than once toward fulfillment of degree requirements. You may not flag courses designated as repeatable, since course content is different each time the course is offered. Exceptions:

0 Selected Topics courses (with numbers ending in " 00 ") may be flagged if they have exactly the same title
o Proposal for Independent Study courses may be flagged when the course subject, number, description, and requirements are the same

Advanced Credit exams or courses that merely substitute for a degree requirement are not considered to be retaken courses for flagging purposes.

## Graduate Students

You may petition your academic unit to flag the following:

- undergraduate or remedial courses that are not part of your graduate program, such as English as a Second Language
- courses taken while non-matriculated
- when officially changing degree programs, courses that don't apply to your new degree program under certain conditions. Contact your department for further information.
- when retaking a course in which you earned a grade of $\mathrm{C}+, \mathrm{C}, \mathrm{C}$ - or F , with the approval of your academic unitl. Graduate courses may be retaken only once. (Note that unless flagging is requested, both the original course and the retaken course will be included in calculations.)


## Undergraduate Students

Courses that have been retaken will be flagged according to the following rules.

## TABLE A Retaken Courses and Flagging Rules

| School/College | Retaken Course Rule | Flagging Rule |
| :--- | :--- | :--- |
| Architecture | Students may take a course for grade improvement. No <br> Architecture course may be registered for more than three <br> times. | The higher of the two grades is counted in the GPA. |
| Arts and Sciences | Students may retake a course for grade improvement. | The higher of the two grades is counted in the GPA. For courses retaken <br> more than once, the two earlier grades may be flagged by petition. Flag- <br> ging, especially when excessive, may have academic consequences. <br> Students are encouraged to speak to their home school/college. Flagging <br> of repeated courses is initiated by the school/college at the conclusion of <br> the semester in which the course was repeated. |
| Education | Students may take a course for grade improvement. <br> Courses may be attempted only three times. | The higher of the two grades is counted in the GPA. For courses retaken <br> more than once, the lower grade may be flagged by petition. |
| Engineering and <br> Computer Science | Any course with a D or F may be retaken. A course may <br> be flagged up to two times; the higher of the two grades <br> will be counted in the GPA. | The higher of the two grades is counted in the GPA. For courses retaken <br> more than once, the lower grade may be flagged by petition. |
| Information Studies | Any course with a C- or lower may be retaken once. | The higher of the two grades is computed in the GPA. |

## UNDERGRADUATE COURSE CATALOG

| Management | Students may retake a course for grade improvement. <br> Normally, students may not retake a course after complet- <br> ing a more advanced course in the same area. Students <br> should check with an advisor in the Undergraduate Office <br> before retaking a course. | The most recent grade is used to calculate the GPA, regardless of which <br> grade is higher. Management grades can be flagged only once. |
| :--- | :--- | :--- |
| Public Communica- <br> tions | Public Communications courses in which a passing grade <br> was earned may not be retaken. | A grade of F will be flagged only once for a retaken Public Communications <br> course. If a student retakes a Public Communications course in which a <br> passing grade was previously earned, the second grade will be flagged. <br> (For retaken courses outside of Public Communications, the most recent <br> grade is used to calculate the GPA regardless of which grade is higher.) |
| Sport and Human <br> Dynamics | Students may retake a course for grade improvement. <br> Students should check with their academic advisor <br> before retaking a course. Courses may be attempted only <br> three times. | The highest grade for the course will be computed in the GPA. |
| Visual and Perform- <br> ing Arts | Any academic elective course in which a student has <br> received a grade of D or F may be retaken. A studio <br> course may be retaken only when a grade of F has been <br> received. | The higher of two grades is computed in the GPA. |

## Flagging Courses When Changing School/ College or Program

## Undergraduate Students

If you are admitted through intra-university transfer into a different SU school/college, you may petition to flag courses you already completed that can't be included in your new program. You must first meet minimum criteria for admission to the new school/college or program, and can only petition your new school/ college to flag courses after admission. If you change programs within your school/college, in rare instances when the new program requires preparation distinctly different from that of the former program, you may petition to have courses flagged that can't be applied toward your new program. Simply changing majors does not qualify for flagging.

Arts and Sciences: Only D and F grades in nonArts and Sciences courses that were required for the previous program may be flagged at the student's request. A, B, C, and I grades in such courses cannot be flagged.
Education and Management: If you transfer into either of these schools and elect to flag courses that do not apply toward your new program, then you must flag all courses that don't apply.

## Flagging Graduate-Level Courses Taken as an Undergraduate

If you petition to take graduate-level courses that will not apply to your undergraduate degree, you must also petition to flag those courses so that they don't count toward your undergraduate record. This flagging must be accomplished prior to the certification of your undergraduate degree. These restricted graduate credits must be flagged before they can be applied to count toward the graduate degree requirements. The grades will calculate in neither the undergraduate nor the graduate GPA.

## Flagging Courses Under Academic Renewal Policy

See Academic Renewal

## Transfer Credit

In compliance with NYSED regulations, SU only awards transfer credit for courses that are an integral part of an SU degree program, as determined by the appropriate SU academic unit.

## Graduate Students

At the graduate level, schools/colleges and departments may assess and accept credit

- earned at another regionally accredited graduate school in the United States or at an institution equivalently recognized in another country;
earned in a course in which the grade earned was at least a B. Coursework completed on a pass/fail basis is not eligible for transfer, unless approved by both the academic unit chair and the dean of the Graduate School; and
- that is an integral part of the degree program.

Transfer credit should be evaluated and posted no later than the end of the semester preceding the semester in which coursework for the degree will be completed. All coursework applied toward a degree must comply with all time limitations.

A maximum of 30 percent of credits counted toward a master's degree at SU may be transferred from another institution provided that the credits are an integral part of the degree program. Transfer credit can comprise no more than 50 percent of the doctoral coursework. This rule does not apply to dual degree programs and to degree programs that are offered jointly with another university.

## Certificate Programs

A maximum of three credits from a combination of transfer and/or external examinations/extrainstitutional and experiential learning will be accepted toward a C.A.S. Exceptions may be granted by petition to the dean of the Graduate School.

## UNDERGRADUATE COURSE CATALOG

School/College Rules

| Information Studies | Up to 15 credits from National Defense University may be applied to the M.S. program in information management. <br> Up to 15 credits received from the University of Virginia School of Continuing and Professional Studies Certificate in Cybersecu- <br> rity Management may be applied to the M.S. in Information Management. <br> Credits completed in approved programs at the Army Signal Center School may be applied to the M.S. in information manage- <br> ment, and the M.S. in telecommunications and network management. |
| :--- | :--- |
| Management | Students may transfer a maximum of six credits of elective courses into their M.B.A. or M.S. program from another AACSB- <br> accredited business school. Students must file a petition and receive approval prior to taking the course. Grades from these <br> courses will not be transferred, nor will they count toward the GPA. A grade of B or better is required in the transfer course. |
| Maxwell | Up to 12 credits from Tsinghua University may be applied to the executive master of public administration. |
| Public Communications | A maximum of 20 percent of credits counted toward the following master's degrees in the S.I. Newhouse School of Public Com- <br> munications may be transferred: advertising; arts journalism; broadcast and digital journalism; communications management; <br> documentary film and history; magazine, newspaper \& online journalism; media management; photography; public relations; <br> and television, radio \& film. |

## Undergraduate Students

Generally, schools/colleges may consider accepting transfer credit from:

- institutions recognized by

0 regional accrediting commissions
0 national accrediting bodies
0 professional organizations that accredit freestanding professional schools and programs within multipurpose institutions*

0 institutions that are recognized candidates for accreditation

- recognized foreign tertiary-level institutions, chartered and authorized by their national governments, generally through the Ministry of Education
- a formal transfer articulation agreement
* For students enrolled in an accredited program at a non-accredited institution, only courses within the discipline that is accredited will be considered for transfer credit. General education and other courses from the institution will not be considered.

However, not all schools/colleges accept credit from all of these sources.

SU grants transfer credit based on course content, the quality of your performance, and applicability to your program. Transfer credit is evaluated only for the degree or certificate program to which you're admitted, and may change if you move into a different SU program. A re-evaluation of transfer credit may also affect your financial aid, especially if your class standing alters. If all of your previous work isn't accepted for transfer, you may enter SU at a different class level than you had attained at
your prior institution. A maximum of 90 credits of transfer credit or a combination of transfer credit and any other credit (e.g., AP exams, experiential learning) will be accepted.
If you plan to take courses at another institution that will transfer back into your SU degree, obtain your home school/college's approval before enrolling. If you take courses at a two-year college

- before junior standing (54 credits), you may take approved coursework during a summer session or while on leave of absence.
- after attaining junior standing, the only courses that will be approved will be those that fulfill lower-division requirements or free electives.
- a maximum of 66 credits from a combination of credit from a two-year college and any other credit (e.g., AP exams, experiential learning) will be accepted.

School/College Rules

| Arts and Sciences | Any transfer credit to be applied to a Syracuse University major or minor must be formally accepted via written petition by the <br> major or minor department. Students are not given transfer credit until their cumulative average is 2.0 or higher. In addition, the <br> following restrictions apply: <br> Basic or college algebra is not accepted. <br> Remedial or developmental coursework is not accepted. <br> Transfer credit for foreign language courses must be evaluated by the Department of Languages, Literatures, and Linguistics <br> at Syracuse University to determine the appropriate course equivalent. [Note: Foreign language courses taken at schools or <br> programs that are not accredited will not be reviewed or approved.] <br> Pass (P) or Satisfactory (S) grades are never accepted toward the fulfillment of requirements for your major/minor or the A\&S <br> Liberal Arts Core. If courses in which you earned a P or S are accepted as transfer credit, they will be awarded as elective credit <br> only |
| :--- | :--- |
| Management | A minimum of 40 credit hours of required Management course work must be taken at SU. <br> Once a student matriculates into Management, only 12 additional credits can be taken outside Syracuse University (with prior <br> approval from an academic advisor) and transferred back to count towards degree requirements. <br> All transfer coursework must be taken through a US domestic institution. Coursework taken through an International Institution <br> will not be accepted after matriculation into the Whitman Program. |
| Public Communications | No more than 12 hours of communications course credits earned in another college or university may be accepted toward <br> meeting the requirements of a major program of study in the School of Public Communications. |
| University College | No more than 12 credit hours earned in another college or university may be accepted toward meeting the program of study <br> requirements in the bachelor of professional studies degree. No more than three credit hours earned in another college or <br> university may be accepted to the organizational leadership credit certificate program requirements. |

## How Transfer Credit Applies Toward Your Degree

All SU transfer credit is measured in semester hours. If your prior institution used a different credit hour system, credits accepted for transfer are converted to semester hours, e.g., credit from institutions on the quarter-hour system is converted to semester hours using the formula of one quarter-hour equals $2 / 3$ semester hour. Grades don't transfer and do not affect your SU cumulative GPA. If you subsequently take a course at SU for which you had previously received transfer credit, the transfer credit will be removed.

## Additional Transfer Credit Rules

- Grades of C- or below will not be accepted.
- "Pass" grades must be certified to be at a C level or higher. Pass grades will normally be accepted only as elective credit.
- Second undergraduate degrees carry additional restrictions; contact your school/college for details.
- Arts and Sciences students are not given transfer credit until their cumulative average is 2.0 or higher.
- For students on academic probation in Public Communications and Visual and Performing Arts, transfer credit will not be given until the cumulative GPA is 2.0 or higher.
- If you were previously matriculated at SUNY ESF, then subsequently matriculated at SU, coursework taken while an ESF student, including SU courses, is treated and evaluated as transfer credit from ESF. Such SU courses do not appear or calculate on the Syracuse University transcript, except as they are
included in a block of transfer credits, i.e., total credit hours accepted from SUNY ESF.


## Credit for ExtraInstitutional and Experiential Learning, and External Examination Programs

Following University rules and program requirements, SU schools/colleges and graduate departments may award credit for various external examinations and other types of extra-institutional and experiential learning. Such credit is evaluated only for the degree or certificate program to which you are admitted, and may change if you move into a different SU program. Credit is evaluated using the guidelines of the American Council on Education and the Council for Advancement of Experiential Learning, as well as our own institutional assessment. See TABLES B, C, and D below for a listing of undergraduate-level exams that may qualify. For examinations or subject areas not covered in the listing below, contact your school/college or appropriate department to determine whether credit may be considered or if you are a candidate for an Advanced Credit Examination. Also contact your school/college to discuss other types of non-institutional experience, such as the military, business, or government, which may qualify for credit.
Undergraduate credit may also be awarded for some matriculation examinations and postsecondary educational experiences offered in other countries. Decisions about awarding such credit are made by the student's school/college during the admissions process.

## Portfolio Review

Credit may be granted for studio work applicable toward professional degrees in the College of Visual and Performing Arts and the School of Architecture upon departmental evaluation of the portfolio.

## Undergraduate Students

- A maximum of 30 credits from any combination of extra-institutional and experiential learning, external examinations, and SU Advanced Credit exams may be accepted.
- A maximum of 66 credits from a combination of credit from a two-year college and any other credit (e.g., AP exams, experiential learning) will be accepted.
- If you subsequently take a course at SU for which credit was awarded for extra-institutional, experiential learning, or external examination programs, that credit will be removed.


## External Examinations

## Undergraduate Students

College Board Advanced Placement (AP) and College Level Examination Program (CLEP) Your home school/college uses the rules in effect at the time you matriculate at SU in order to evaluate and accept degree-program credit for AP and CLEP exams. The academic unit with principal responsibility for the examination subject recommends the minimum score for credit and SU course equivalency; however, your home school/ college may have higher score requirements and/ or different qualifications, both for awarding credit and meeting degree requirements.

TABLE B College Board Advanced Placement Examinations

| Exam <br> Subject/Title | Minimum <br> Score | Awardable <br> Credit | Equivalent SU <br> Course | Recommending School/ <br> College | Additional School/College Requirements or Qualifications |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Art/2-D Design | 5 | 3 | Studio Elective | Visual and Performing <br> Arts | Visual and Performing Arts Does not count toward Art, <br> Design or Transmedia required first-year studio courses |
| Art/Drawing | 5 | 3 | Studio Elective | Visual and Performing <br> Arts | Visual and Performing Arts Does not count toward Art, <br> Design or Transmedia required first-year studio courses |
| Art History | 3 | 6 | HOA 105, HOA 106 | Arts and Sciences |  |
| Biology | 4 | 8 | BIO 121, BIO 123, <br> BIO 124 | Arts and Sciences |  |
| Chemistry | 3 or 4 | 3 | CHE 103 | Arts and Sciences | Arts and Sciences Only a score of 5 counts as a sequence <br> in natural sciences and mathematics. Pre-medical <br> students should consult with health professions advising <br> before accepting AP chemistry credit. |
| 5 | 8 | CHE 106/CHE 107 <br> and <br> CHE 116/CHE 117 | Arts and Sciences | Public Communications Must also place out of CHI 102 <br> (with a score of 3) or CHI 201 (with a score of 4 or 5) on <br> the placement exam. |  |
| Chinese | 3 | 4 | CHI 102 | CHI 201 | Arts and Sciences |
| Comparative Govern- <br> ment and Politics | 4 | 3 | PSC 123 | 4 |  |

## UNDERGRADUATE COURSE CATALOG

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Computer Science A or Computer Science AB \& 3 \& 3 \& \& CPS 196 \& Engineering and Computer Science \& Engineering and Computer Science Students will receive this credit only upon approval of their department chair. <br>
\hline English Language and Composition \& 4 \& 6 \& \& WRT 105 - WRT 205 \& Arts and Sciences \& <br>
\hline English Literature and Composition \& 4 \& \&  \& ETS 151 (or ETS
117 or ETS 118
or ETS 152 or ETS
153) and WRT 105 \& Arts and Sciences \& Arts and Sciences Students scoring 4 or better will receive 3 credits for ETS 151. Such students who subsequently elect to take ETS 151 may transfer the credit to one of the following: ETS 117, ETS 118, ETS 152, or ETS 153. Three additional credits are awarded for WRT 105. <br>
\hline Environmental Science \& 3 \& 6

3 \& 3 \& EAR 200 \& Arts and Sciences \& <br>
\hline European History \& 4 \& \multicolumn{2}{|l|}{6} \& HST 111, HST 112 \& Arts and Sciences \& <br>
\hline French Language and Culture \& 3 \& \multicolumn{2}{|l|}{4} \& FRE 102 \& Arts and Sciences \& Public Communications Must also place out of FRE 102 on the placement examination. <br>
\hline German Language and Culture \& 3 \& \multicolumn{2}{|l|}{4} \& GER 102 \& Arts and Sciences \& Public Communications Must also place out of GER 102 on the placement examination. <br>

\hline Human Geography \& 4 \& \multicolumn{2}{|l|}{3} \& $$
\begin{aligned}
& \text { GEO } 105 \text { or GEO } \\
& 171
\end{aligned}
$$ \& Arts and Sciences \& <br>

\hline \multicolumn{2}{|l|}{Italian Language and Culture} \& 3 \& 4 \& ITA 102 \& Arts and Sciences \& Public Communications Must also place out of ITA 102 (with score of 3). <br>
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Japanese Language and Culture}} \& 3 \& 4 \& JPS 102 \& Arts and Sciences \& \multirow[t]{2}{*}{Public Communications Must also place out of JPS 102 (with a score of 3) or JPS 201 (with a score of 4 or 5) on the placement examination.} <br>
\hline \& \& 4 \& 4 \& JPS 201 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{\multirow[t]{3}{*}{Latin}} \& 3 \& 4 \& LAT 102 \& Arts and Sciences \& \multirow[t]{3}{*}{Public Communications must also place out of LAT 102 (with a score of 3 ) or LAT 201 (with a score of 4 or 5) on the placement examination.} <br>
\hline \& \& 4 \& 4 \& LAT 201 \& Arts and Sciences \& <br>
\hline \& \& 5 \& 7 \& LAT 201, LAT 320 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Macroeconomics} \& 4 \& 3 \& ECN 102 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Mathematics- Calculus AB}} \& \multirow[t]{2}{*}{3} \& 3 \& MAT 285 \& Arts and Sciences \& \multirow[t]{2}{*}{Engineering and Computer Science Four credits awarded for MAT 295 only, pending results of the math placement examination.} <br>

\hline \& \& \& $$
\begin{array}{|l|}
\hline 6 \text { or } \\
4
\end{array}
$$ \& MAT 285 and MAT

286 or MAT 185 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Mathematics- Calculus BC} \& 4 \& 8 \& MAT 295, MAT 296 \& Arts and Sciences \& Engineering and Computer Science Up to 8 credits awarded for MAT 295 only, pending results of the math placement examination. <br>
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Mathematics- Calculus BC-AB subscore}} \& 3 \& 3 \& MAT 285 \& Arts and Sciences \& \multirow[t]{2}{*}{Arts and Sciences Exemption from Quantitative Skills and substitute for MAT 285 in natural sciences and mathematics.} <br>

\hline \& \& 4 \& $$
\begin{array}{|l|}
\hline 6 \text { or } \\
4
\end{array}
$$ \& MAT 285 and MAT

286 or MAT 185 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Mathematics Level II $\dagger$} \& 4 \& 4 \& MAT 194 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Microeconomics} \& 4 \& 3 \& ECN 101 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Music Theory} \& 3 \& 3 \& HOM/MTC 125 \& Arts and Sciences \& Awarded for non-music majors only. <br>
\hline \multicolumn{2}{|l|}{Physics I} \& 3 \& 4 \& PHY 101 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Physics II} \& 3 \& 4 \& PHY 102 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Physics B} \& 3 \& 8 \& PHY 101, PHY 102 \& Arts and Sciences \& Education (Inclusive) will accept a score of 3 only after a grade of $\mathrm{B}+$ or higher is earned in an SU lab/science course. <br>
\hline \multicolumn{2}{|l|}{Physics C (Electricity and Magnetism)} \& 3 \& 4 \& PHY 102 or PHY 212, PHY 222 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Physics C (Mechanics)} \& 3 \& 4 \& PHY 101 or PHY 211, PHY 221 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Psychology} \& 4 \& 3 \& PSY 205 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{Spanish Language} \& 3 \& 4 \& SPA 102 \& Arts and Sciences \& Public Communications Must also place out of SPA 102 on the placement examination. <br>
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Spanish Literature}} \& \multirow[t]{2}{*}{3} \& 4 \& SPA 102 \& Arts and Sciences \& \multirow[t]{2}{*}{Public Communications Must also place out of SPA 102 (with a score of 3 ) or SPA 201 (with a score of 4 or 5 ) on the placement examination.} <br>
\hline \& \& \& 4 \& SPA 201 \& Arts and Sciences \& <br>

\hline \multicolumn{2}{|l|}{Statistics} \& 3 \& $$
\begin{array}{|l|}
\hline 3 \text { or } \\
4
\end{array}
$$ \& MAT 121 or MAT 221 or STI 101 \& Arts and Sciences \& Management Credit accepted as MAS 261. <br>

\hline \multicolumn{2}{|l|}{U.S. Government and Politics} \& 4 \& 3 \& PSC 121 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{U.S. History} \& 4 \& 6 \& HST 101, HST 102 \& Arts and Sciences \& <br>
\hline \multicolumn{2}{|l|}{World History} \& 4 \& 6 \& HST 121, HST 122 \& Arts and Sciences \& <br>
\hline
\end{tabular}

## UNDERGRADUATE COURSE CATALOG

## TABLE C CLEP Examination Credit

| Exam Subject/Title | Minimum Score | Awardable <br> Credit | Equivalent SU Course | Recommending School/College |
| :--- | :--- | :--- | :--- | :--- |
| American Literature | 50 | 3 | ETS 118 |  |
| French Level I | 50, plus passing of oral test at SU | 4 | FRE 101 | Arts and Sciences |
| French Level II | 62, plus passing of oral test at SU | 4 | FRE 102 | Arts and Sciences |
| General Biology | 70 | 8 | BIO 121, BIO 123, BIO 124 | Arts and Sciences |
| General Chemistry | 50 | 6 | CHE 106, CHE 116 | Arts and Sciences |
| German Level I | 50, plus passing of oral test at SU | 4 | GER 101 | Arts and Sciences |
| German Level II | 63, plus passing of oral test at SU | 4 | GER 102 | Arts and Sciences |
| History of U.S. I, II | 50 | 6 | HST 101, HST 102 | Arts and Sciences |
| Political Science | 50 | 3 | PSC 121 | Arts and Sciences |
| Spanish Level I | 50, plus passing of oral test at SU | 4 | SPA 101 | Arts and Sciences |
| Spanish Level II | 66, plus passing of oral test at SU | 4 | SPA 102 | Arts and Sciences |
| Western Civilization | 50 | 6 | HST 111, HST 112 | Arts and Sciences |

International Baccalaureate (IB) Credit for Higher
Level IB examinations completed with a grade of

5 or higher will be awarded as indicated in Table exams or additional requirements.
D. No credit will be awarded for IB Standard Level

## TABLE D International Baccalaureate Credit

| IB Higher Level Examination | Minimum Score | Syracuse University Credit |
| :--- | :--- | :--- |
| Biology | 5 | 8 credits - BIO 121,123, 124 |
| Business and Management | 5 | 6 credits lower division; free elective only |
| Chemistry | 5 | 7 credits - CHE 103 and 113 |
| Economics | 5 | 6 credits - ECN 101 and 102 |
| English | 5 | 6 credits - WRT 105 and by petition either ETS 151 \& ETS 153 |
| Foreign Languages | 5 | No credit awarded. Exemption from basic and continuing skills in foreign languages according to <br> performance on proficiency examination administered by the department. |
| Geography | 5 | 6 credits - GEO 105 and 273 |
| History | 5 | 6 credits lower division |
| Mathematics | 5 | 6 credits - Quantitative skills |
| Philosophy | 5 | 6 credits - PHI 191 and 197 |
| Physics | 5 | 8 credits - PHY 101, 102 |
| Psychology | 5 | 6 credits - PSY 205 and 274 |
| Social and Cultural Anthropol- <br> ogy | 5 | 6 credits - ANT 111 and 121 |

## Degree and Certificate Programs

## Degrees

The types of degrees conferred, the minimum number of credit hours required for each degree, and the list of approved programs of study can be found in the Academic Offerings section of the course catalog. Curricular requirements for
each degree and certificate program are found in the Academic Offerings of each School and College. Students must follow the curriculum requirements that are in place at the time of their admission to that program. This may be the original matriculation term at Syracuse University or the term in which a student is accepted to a new degree program.

## TABLE E Degree Types

| Type | Requirements | Notes |
| :--- | :--- | :--- |
| Associate's | A.A.: Three-quarters of the work must be in the liberal arts and sciences. | Only available to part-time University College students. See <br> Residency Requirement. |
| Bachelor's | B.A.: Three-quarters of the work must be in the liberal arts and sciences. <br> B.S.: One-half of the work must be in the liberal arts and sciences. <br> B. Arch., B.F.A., B.I.D., B. Mus.: One-quarter of the work must be in the liberal <br> arts and sciences. <br> B.P.S. (Bachelor of Professional Studies) one quarter of the work must be in <br> the liberal arts and sciences. |  |

## UNDERGRADUATE COURSE CATALOG

| Master's | At least one of the following: passing a comprehensive test, writing a thesis based on independent research, or completing an appropriate special project. | Master's degree programs normally require a minimum of one academic year of full-time graduate level study, or its equivalent in part-time study, with an accumulation of not less than 30 semester hours. <br> Courses numbered 500-599 may not make up more than one-half of the Syracuse coursework |
| :---: | :---: | :---: |
| Master of Philosophy | It may be conferred upon a student who has satisfactorily fulfilled all Ph.D. requirements but the dissertation. The following requirements apply: (1.) The student must be enrolled in the Ph.D. program; (2.) The student must have reached all but dissertation (ABD) status, in accordance with program requirements, and such designation must appear on the student's advising transcript; (3.) The student must complete a diploma request to receive an M.Phil. degree; and (4.) The M.Phil. must be registered with NYSED. | An intermediate degree between the master's and the doctor of philosophy, awarded by the Graduate School upon the recommendation of the academic unit. Note that not all departments have registered this degree with NY State. Courses numbered 500-599 may not make up more than one-half of the Syracuse coursework. |
| Doctoral | Doctoral studies shall include the production of a substantial report on research, or the independent investigation of a topic of significance to the field of study, or the production of an appropriate creative work, or the development of advanced professional skills. | A doctoral degree represents completion of three academic years of graduate-level study or an equivalent that can be shown to accomplish the same goals. <br> Courses numbered 500-599 may not make up more than one-third of the Syracuse coursework for a doctoral program. |
| Computer Engineer | The programs consist of coursework, examinations, and an independent study project. The minimum program consists of 60 credits of work beyond the bachelor's degree, of which $6-18$ credits are independent study. Each student will be examined in three topics in computer engineering. | The degree of computer engineer is offered for qualified students seeking advanced technical education beyond the M.S. degree. The program is designed to provide mastery of a field of knowledge and familiarity with related fields, as well as to develop a capacity for independent study. |
| Electrical Engineer | The program consists of coursework, examinations, and an independent study project. The minimum program consists of 60 credits of work beyond the bachelor's degree, of which 6-18 credits are independent study. Each student will be examined in four topics: engineering mathematics and three fields of electrical engineering. | The degree of electrical engineer is offered for qualified students seeking advanced technical education beyond the M.S. degree. The program is designed to provide mastery of a field of knowledge and familiarity with related fields, as well as to develop a capacity for independent study. Candidates, with the approval of the faculty, may work toward the Ph.D. after completing the electrical engineering degree. |

# Graduate Degree and Certificate Programs 

## Graduate Degree Programs

## Master's Degrees

[^0]voting members that include a chairperson, thesis or area of study advisor, and other specialists in your subject area. The school/college will conduct the examination in the manner it considers most effective; contact your department and school/ college for specific procedures and guidelines. The committee chair will preside over the exam and ensure that department/school/college and Graduate School/Graduate Degree Certification Office regulations and declared policies are followed.

Your oral examination committee will prepare a report that reflects one of the following statuses: pass; pass with minor revisions (generally editorial); pass with major revisions (substantive); not pass. You are entitled to an explanation from the committee concerning the results of the examination.

## Doctoral Degrees

Requirements for the doctoral degree emphasize mastery of a field of knowledge, familiarity with allied areas, facility in the use of research techniques, and responsibility for the advancement of knowledge. The degree is given in recognition of high attainments in your chosen field, as shown by the completion of specified courses and by the production of a dissertation demonstrating the ability to carry out independent investigation that advances knowledge in the field.

## Program of Study

Each academic unit determines, consistent with its approved and registered curriculum, the number of coursework credits and the number of dissertation credits that will constitute your program of study, including that portion of the work for the master's that will form an integral part of the doctoral program. Minor courses included in the program of study should support the total program, rather than be restricted to academic unit boundaries.

## Qualifying Examinations

You must pass a qualifying examination no later than the end of the term prior to the term in which you expect to complete doctoral degree requirements. The qualifying exam will be set by your academic unit, and may be in oral or written form, or both. You must demonstrate acceptable competence in any required languages or research tools as designated by your program before being admitted to the qualifying exam. If the results of this examination are unsatisfactory, you may be granted a second exam after completing a semester of additional study.

Advancement to Candidacy/Time to degree You will be admitted to candidacy when you have completed all requirements for the degree except for the dissertation and the final oral exam. The maximum time allowed to reach candidacy status is seven years from the term you matriculated into the doctoral program. Your academic unit must
notify the Graduate Degree Certification Office when you have reached this status before the end of the term in which the status is effective. The maximum time for completion of a doctoral degree is five years from the end of the semester in which you are admitted to candidacy.
Exceeding Time to Degree Requirements If you have exceeded the seven-year limit for achieving ABD status, you must register for GRD 991, which requires a minimum of one credit hour per semester, each fall and spring semester until you achieve ABD status. If you fail to register for GRD 991, for a given term, you will be withdrawn from your program.

If you have exceeded the degree completion limit of five years after achieving ABD status, you must register for GRD 991, which requires a minimum of one credit hour per semester, each fall and spring semester until the completion of your doctoral degree. If you fail to register for GRD 991, for a given term, you will be withdrawn from your program.

## Dissertation advisor

A faculty member from your department or program will be identified as your dissertation advisor. The dissertation advisor should be an SU tenured or tenure-track faculty member in the program of study of your dissertation. In exceptional cases, where faculty emeriti or others with outstanding qualifications in your area of research will direct the dissertation, a member of the SU faculty from your academic unit must jointly oversee the preparation of your dissertation.

## Oral Examination

The oral examination committee:
The academic unit appoints a six-member oral examination committee, including a chair, at the recommendation of your dissertation advisor, and with the concurrence of the Graduate School.

The committee chair:

- should have an affinity for the field in which the dissertation was written;
- represents the Dean of the Graduate School;
- typically will be an SU tenured or tenure-track faculty member from outside the department or program in which the dissertation was written; and
- alternatively, may be either a faculty emeritus or College of Law faculty member.
Your dissertation advisor will be a committee member. Other committee members should be tenured or tenure-track SU faculty members. One external member can be included, based on
subject-matter expertise; however, this committee member can't be a personal acquaintance. You must petition to include more than one external committee member.
The oral examination:
Prior to the exam, the Graduate Degree Certification Office must verify that you've been admitted to candidacy, and that all supporting documentation has been filed. Your dissertation advisor and academic unit will determine the scheduling of the exam with the approval of the Graduate Degree Certification Office. Each school/ college is free to conduct oral exams in the manner considered to be most effective.
The chair of the oral examination committee has several responsibilities:
- Represent the Dean of the Graduate School.
- Preside over the exam and ensure that academic unit and Graduate School policies and regulations are followed.
- Advise the committee as to general exam and questioning procedures.
- Participate in the questioning of the candidate.
- Vote on the outcome, and secure the committee's vote.
- Submit a written report to the Dean of the Graduate School that includes:
0 the result of the vote, with signatures of approval and appropriate comments;
0 comments on the quality of the examination; and

0 recommendations for any procedural improvements.

Further oral exam considerations:

- Exam time and place are publicly announced; graduate students and faculty are encouraged to attend and participate, but will not be allowed to vote.
- If a committee member must be absent from the oral defense:
0 that committee member must submit questions and/or comments in writing to the chair in advance; and
0 the Graduate School must approve any committee substitutions after the exam has been scheduled, or if more than one committee member will be absent.
Voting and results:
- Voting will be held in executive session of the committee.
- All committee members, including the chair, vote equally.
- In order to pass the exam, a majority of the committee must vote favorably; members may make their approval conditional on changes to the dissertation.
- The committee's report will recommend one of the following outcomes:

0 pass
0 pass with minor revisions (generally editorial)
0 pass with major revisions (substantive)
0 not pass
You are entitled to an explanation from the committee concerning the outcome of the defense.

## Graduate Certificate Programs

Certificates of Advanced Study (C.A.S.) (excluding programs registered as preparing individuals for a teaching certificate, educational leadership certificate, or a professional license issue by the State Education Department): A matriculated student who is studying for a C.A.S. must satisfactorily complete a program of study of not less than 12 credits that is approved by the academic unit and filed with the Graduate Degree Certification Office. C.A.S. programs may be part of an existing degree program or a stand-alone program of study.
Eligibility requirement
To be awarded a C.A.S., a student must be matriculated in the certificate program for at least one semester. Matriculation may not be backdated.

## Undergraduate Degree and Certificate Programs

## Undergraduate Degree Programs

Within the bachelor's degree there are four types of degree programs available to undergraduate students at SU: single degree programs, single degree programs with double majors, single degree programs with dual majors, and combined degree programs. Generally, students must complete a prescribed course of study and minimum number of credit hours to complete a degree program.

## UNDERGRADUATE COURSE CATALOG

## TABLE F Undergraduate Degree Programs

| Type | Requirements | Notes | School/College Information |
| :---: | :---: | :---: | :---: |
| Single Degree Program |  |  |  |
| A single degree program consists of one major in one school/college. | A single degree program requires the completion of all degree requirements within one school/ college, including the requirements of one major program of study in that school/college. | One degree is conferred and one diploma awarded. | Students are enrolled in one school/college. |
| Single Degree Program with Double Major |  |  |  |
| A single degree program with double major consists of two major programs of study simultaneously pursued (a) in the same school/college or (b) in two separate schools/colleges of the University. | A single degree program with double major requires completion of all degree requirements within one school/college and the requirements for each major. | One degree, certified by the home school/ college, is conferred. One diploma, signed by the dean of the home school/college, is awarded. | Students are enrolled in one school/college. In some schools/colleges, completion of double majors, especially when the second major is outside the school/college, may require more than the minimum credits required for graduation. Double majors are available only in some schools/ colleges. |
| Single Degree Program with Dual Majors |  |  |  |
| A single degree program with dual majors consists of two major programs of study simultaneously pursued in two separate schools/colleges of the University. | A single degree program with dual majors requires completion of all degree requirements in both schools/colleges, as well as requirements for a major in each school/college or one dually approved major. | Upon certification by both schools/colleges, one degree, the degree associated with the home school/college major, is conferred. One diploma is awarded, signed by the dean of each school/college. Students who wish to pursue other dual programs that have not been formally established must obtain the prior written permission of both deans. In cases where the academic rules of two schools/colleges conflict, the policies of the home school/college take precedence. Completion of some dual programs, particularly those with more than two majors, may require additional credit hours. | Students are enrolled in two schools/colleges, with one designated as the home school/college. Schools/Colleges that have approved single-degree programs with dual majors are listed in Table G. <br> Architecture Single degree programs with dual majors are not available <br> Arts and Sciences Students enrolled in a single degree programs with a dual major must earn a minimum of 90 credits in Arts and Sciences. In most cases this will mean that students enrolled in any Arts and Sciences dual program may count only credit earned in Arts and Sciences and the other school/college of enrollment toward the total credit hours required for the degree. Coursework taken in any other school/ college that does not count toward the 90 Arts and Sciences credit-hour requirement may be considered excess credit and will appear on the transcript and will contribute to the cumulative GPA, but it will not count toward the credit hours required for the degree. <br> Engineering and Computer Science <br> Completion of a second major within Engineering and Computer Science requires completion of all requirements for each major in addition to the requirements of the dual school/college. |
| Combined Undergraduate Degree Program |  |  |  |

## UNDERGRADUATE COURSE CATALOG

A combined degree program consists of two degree programs with distinct degree titles that recognize competencies in two essentially different areas pursued simultaneously in the same school/college or two different schools/colleges.

Concurrent admission to a second undergraduate degree program is constrained by NYSED's restrictions regarding second undergraduate degrees and review by the University registrar.
Students must meet admissions requirements of both degree programs.
For programs involving two schools/colleges, students must fulfill degree requirements in both schools/colleges. Students in combined programs must complete 25 percent additional work beyond the normal requirements for one of the degrees (this may be either the degree with the higher or lower credit-hour requirements, based on the school's/college's determination), e.g., 30 more credit hours for a 120-credit hour degree.
The additional credits must be SU credit as defined under the Residency Requirement. Transfer and other credit may be accepted only if the second degree requires more than 25 percent additional credits, and such credit is applied in excess of the 25 percent additional credits.

Two degrees and two diplomas are conferred The combined programs may be two undergraduate degree programs or an undergraduate and a graduate degree program. See Table H for a list of combined undergradu-ate-graduate degree programs.
Students pursuing a B.A. degree will not be admitted to a second B.A. degree program in the same school/college. Approval for admission to a second B.S. degree program requires a significant difference in overall degree requirements between the two programs.
The awarding of the second degree may be either concurrent with, or subsequent to, the awarding of the first.

Programs available as a single degree with dual majors (see Table G) are not available as combined degree programs.
There is one formally established undergraduate combined program: Arts and Sciences and Engineering and Computer Science B.A. (or B.S., by petition) in Arts and Sciences and B.S. in Engineering and Computer Science.
Students who wish to pursue other combinations of undergraduate degree programs must obtain the prior written permission of both deans.

## TABLE G Single Degree Programs with Dual Majors

| Home School/College | Dual School/College | Type of Degree |
| :--- | :--- | :--- |
| Arts and Sciences** | Education** | B.A. or B.S.* |
| Arts and Sciences | Public Communications | B.A. or B.S.* |
| Education | Sport and Human Dynamics | B.S. |
| Engineering and Computer Science | Information Studies | B.S. |
| Information Studies | Management | B.S. |
| Management | Public Communication | B.S. |
| Public Communications | Information Studies | B.S. |
| Visual and Performing Arts | Education | B.F.A. or B.Mus. |

* Students pursuing a B.S. degree in Arts and Sciences must petition the department offering the major to be formally accepted as candidates.
> **Arts and Sciences/Education dual program is intended for students pursuing teacher certification. Those wishing to pursue two majors not associated with teaching may continue as single degree program with double major.


## Second Undergraduate Degrees

If you previously earned a bachelor's degree at SU or another institution, you may or may not be admissible to a second undergraduate degree program, depending on the disciplinary and professional "proximity" of the completed and
proposed programs. NYSED has ruled that "the conferral of two bachelor's or associate degrees should be reserved as a means of recognizing that a candidate has competencies in two essentially different areas: when a second degree, as opposed to one degree with a double major, is academically justifiable and when the second degree requires one-fourth additional work (i.e., 30 credit hours for a 120-credit hour degree)."
The University registrar, in consultation with the associate provost for academic programs and appropriate academic advisors, will decide whether admission to a second undergraduate degree program is in accord with NYSED's criteria. If you earned a B.A. degree you will not be admitted to a second B.A. degree program
that falls within the same SU school/college (or comparable school/college, if the first degree was earned elsewhere), due to the significant overlap of degree requirements. Approval for admission to a second B.S. degree program requires a significant difference in overall degree requirements between the two degree programs. Students who meet these criteria must also meet all admissions requirements of the program to which they apply. Students whose first degree was earned at Syracuse University must file an Application for Readmission, available from the admitting school/college office. Students with first degrees from other institutions follow the normal admission application procedure.

A minimum of 30 credits for a second

## UNDERGRADUATE COURSE CATALOG

undergraduate degree must be Syracuse University credit, as defined under the Residency Requirement. Transfer and other credit may be accepted only if the second degree requires more than 25 percent additional credits, and such credit is applied in excess of the 25 percent additional credits.

At the time of matriculation in the second undergraduate degree, any courses previously
taken as a non-matriculated student at SU will be entered on the undergraduate record, if they do not already appear there. This coursework will calculate toward credit hour and grade point totals on the undergraduate record.

The official Syracuse University transcript record for students with a prior SU undergraduate degree is cumulative, i.e., courses and grades for all undergraduate work, regardless of the
degree program to which they apply, appear on one transcript with cumulative totals. The home school/college for the second undergraduate degree manually maintains and monitors the record of work related to the second degree. Calculations for satisfactory academic performance, honors, etc., are derived from the school/college or departmental records and may not be reflected on the official transcript.

## TABLE H Combined Undergraduate/Graduate Degree Programs

| Requirements | Notes | School/College Information |
| :---: | :---: | :---: |
| Undergraduate/Graduate Teacher Preparation Degree Programs |  |  |
| Students must fully meet the combined requirements for both degrees. | Undergraduate students are accepted in the combined program through a two-step process: an initial declaration, then an application prior to their first graduate semester. Graduate status is required in the 5th year of study, for the two final semesters. Both degrees are awarded concurrently. <br> Graduate courses taken in the first four years that count toward fulfillment of graduate requirements are removed from calculation on the undergraduate record and transferred as a block of credits to the graduate record, where the credits apply but grades do not calculate toward the GPA. However, these grades will be used in manually calculating the GPA for all graduate credits toward the Master's degree, to assure that the minimum 3.0 requirement has been met. | Arts and Sciences/Education B.A./M.S. 5-year Teacher Preparation programs |
| Undergraduate and Other Non-Law Graduate Degree Program |  |  |
| Students must fully meet the requirements for both degrees. | Students are accepted for graduate study after completion of the third year of study but are not fully matriculated as graduate students until bachelor's degree requirements have been met. The undergraduate degree is awarded before completion of the graduate degree. Graduate courses taken in the fourth year of study count toward fulfillment of both undergraduate and graduate degree requirements. The graduate courses are included in the undergraduate tuition and appear only on the undergraduate record, and grades calculate only toward the undergraduate GPA. A block of transfer credits labeled as "transferred from SU undergraduate record" appears on the graduate record, if needed, and applies credit hours toward the graduate degree. | There are two formally established combined programs: <br> Engineering and Computer Science B.S. and M.S. in Computer Science; B.S. and M.B.A. <br> Students who wish to pursue other combinations of undergraduate and graduate degree programs must obtain the prior written permission of both deans. |
| Undergraduate and Law Graduate Degree Program |  |  |
|  | In this program, students matriculate in the law program after completion of the third year of undergraduate study. Courses taken in the first year of law study count toward fulfillment of both undergraduate and law degree requirements. They are billed at the College of Law tuition rate and appear only on the law record, and grades calculate only toward the law GPA. A block of transfer credits labeled as "transferred from SU law record" appears on the undergraduate record and applies credit hours toward the undergraduate degree. The undergraduate degree is awarded before completion of the graduate degree. |  |
| Other Simultaneous Pursuit of Undergraduate and Graduate Degrees |  |  |
|  | In exceptional circumstances requiring approval of the academic department and the Graduate School, undergraduate students may be formally accepted into a graduate degree program prior to completion of undergraduate degree requirements. The status of the student, i.e., whether she/he is considered an undergraduate- or graduate-level student, will be determined upon acceptance to the graduate program. For students who are considered to be undergraduates until completion of undergraduate requirements, courses which apply to the graduate degree will be flagged on the undergraduate record to remove them from calculation there and transferred as a block of credit to the graduate record. For students who are considered to be graduate students, courses taken to fulfill undergraduate degree requirements will be flagged on the graduate record to remove them from calculation there and transferred as a block of credit to the undergraduate record. In both cases, only the credit (i.e., not grades) for the flagged courses will be calculated on the record. |  |

## Undergraduate Certificate Programs

A matriculated student who is studying for a certificate must satisfactorily complete a program of study of not less than 12 credits that is approved by the academic unit and by NYSED.

## Degree Certification

School/college officials certify to the Registrar's Office that degree and certificate requirements have been completed. This process generally takes four to six weeks after degree requirements have been completed. Degrees are awarded for the official date following the completion of degree requirements; the degree award dates fall in May, June or July, August, and December. Only courses that are an integral part of your degree program will be credited toward graduation requirements, in compliance with NYSED requirements.
Deadlines are established for each degree award date for fulfilling degree requirements. At that point, the graduating class is closed. Students who do not resolve any outstanding issues by the deadline will have their degree awarded for the next degree date after they satisfy all remaining issues. Degrees are not awarded retroactively.

The University Senate recommends to the SU Board of Trustees the listing of candidates who will meet all requirements for degrees and certificates of advance study by the appropriate commencement date each year.

Note: Participating in convocation and commencement ceremonies doesn't imply that degree requirements have been completed.

You must file a diploma request through MySlice (myslice.syr.edu) no later than the beginning of your last semester of study.

## Diplomas and Certificates

Diplomas are ordered after program completion has been certified by schools/colleges and posted by the Registrar's Office. You will receive your diploma/certificate four to six weeks after the certification/posting process has been completed. SU reserves the right to withhold diplomas/certificates from students who are financially delinquent, or at the request of the Office of Student Rights and Responsibilities or the Academic Integrity Office. Diplomas are issued once. Diplomas can be reissued if lost or damaged. Replacement diplomas are issued with current signatures.
Undergraduate diplomas:

- display the degree title;
- display University honors and "Renée Crown University Honors," when awarded;
- do not list major or minor; and
- are signed by the Chancellor and the Dean(s) of the student's school(s)/college(s).
Graduate diplomas:
- display the degree title;
- list major, except when already included in the degree title, e.g., Master of Social Work; and
- are signed by the Chancellor, and the dean(s) of the student's school(s)/college(s).

Certificates of Advanced Study:

- display the certificate title (i.e., Certificate of Advanced Study);
- list the area of study; and
- are signed by the Chancellor, and the Dean(s) of the school(s)/college(s) that award the C.A.S.


## Undergraduate Certificates:

- display the certificate title;
- list the area of study; and
- are signed by the Chancellor and the Dean of the school/college that awards the certificate.


## Grades

## Grading System

## TABLE I Letter Grades

| Grades | Grade Points per Credit |
| :--- | :--- |
| A | 4.000 |
| A- | 3.667 |
| B+ | 3.333 |
| B | 3.000 |
| B- | 2.667 |
| C+ | 2.333 |
| C | 2.000 |
| C- | 1.667 |
| D $^{1}$ | 1.000 |
| D- 1,2 | .667 |
| F | 0 |

TABLE J Grading Symbols

| Grading <br> Symbols | Meaning | Grade Points <br> per Credit | Explanation |
| :--- | :--- | :--- | :--- |
| I | Incomplete | 0 | Indicates that, due to exceptional circumstances, a student has made a formal arrangement with <br> the instructor to complete remaining work/assignments after the course ends. |
| AU | Audit | Not counted | Indicates that a student elected to take the course for no (zero) credit. |
| NA | Did not attend and did <br> not withdraw | Not counted | Indicates that a student never attended the course, or that participation ended so early in the <br> term that there was no basis for evaluation. |
| NR | Not Required | Not counted | Used for courses or components of courses that do not require a grade. |
| P | Pass | Not counted | Indicates satisfactory completion of a Pass/Fail-graded course or one for which a student elected <br> the Pass/Fail option. |
| RM | Remedial | Not counted | Used for college-level remedial and developmental courses. |
| V | Variable length course- <br> grade not yet due | Not counted | Used for courses that do not follow the normal semester timeline. V indicates that normal prog- <br> ress is being made at the end-of-semester point. |
| WD | Withdrew | Not counted | Indicates that a student withdrew from the course, after the academic drop deadline. |

## UNDERGRADUATE COURSE CATALOG

## Grades and Grading Symbols Additional Information

## Letter Grades

Undergraduate Students

You may have the option to elect a letter grade in a pass/fail-graded course. When permissible, you must select that option by the grading option deadline, and you may not rescind the selection after the deadline.

## I (Incomplete)

You may request an Incomplete if you have exceptional circumstances that prevent you from fulfilling all course requirements on time. You will need your instructor's approval, and will need to have completed enough course content to have a grade assigned based on your work to date. An Incomplete is not available if you have not completed enough work on which to base a grade. Check with the appropriate instructor about deferred exams and any other requirements. If you take a leave of absence or are withdrawn from the University, you can't receive Incompletes for courses in which you were registered. Complete a "Request for Incomplete Grade" form, which is an agreement between you and your instructor that specifies the reasons, conditions, and time limit for removing the Incomplete from your record. An Incomplete will calculate as an F in your GPA. As a function of the agreement, your instructor will calculate a grade for you based on work completed to date, counting unsubmitted work as zero. This is the grade you will receive if a "Removal of Incomplete Grade" form is
not submitted to the Registrar's Office by the appropriate deadline.

## AU (Audit)

You may audit courses with instructor approval. You must select the audit option by the grading option deadline, and cannot rescind the selection after the deadline. Audited courses are non-credit, do not meet any degree requirements, and aren't counted toward enrollment status. Instructors may record a grading symbol of NA instead of AU if you don't meet stated academic or attendance requirements. You will have limited access to SU library resources if you are auditing a class and are not registered for any credit classes for the term. Courses that require a Proposal for Independent Study, studio art or applied music courses offered by the College of Visual and Performing Arts, and University College BPS and LGL courses can't be audited.

## NA (Did Not Attend and Did Not Withdraw)

An NA is applied when a student either never attends the course, or when participation ended so early in the term that there is no basis for evaluation and the student fails to drop or withdraw. If enough work is completed to establish an evaluation, a course grade will be calculated on the basis of work submitted. Unsubmitted work will be counted as zero. If you receive an NA for a course, you will no longer have the option of petitioning for an Incomplete or a letter grade.

## P/F (Pass/Fail)

Credit is earned for courses with a P , but not with an F .

Note: Graduate students may only receive pass/ fail grades for courses designated as pass/fail.

You may have the option to elect a pass/fail grade for some courses. You must select this option by the grading option deadline, and you may not rescind the selection after the deadline.

School/college-specific pass/fail rules are listed in the table below. Some additional points:

- If you select a pass/fail option, grades of $\mathrm{A}, \mathrm{A}$-, $B+, B, B-, C+, C, C-$, and $D$ are converted to $P$. No grade other than P or F will be reported by the Registrar's Office.
- If you choose to major in a field in which you previously took a course as pass/fail, your home school/college and the chair of the department in which you took the course will determine whether and upon what terms the course can be used to satisfy departmental requirements.
- SU Abroad students are limited to one pass/ fail course each semester.
- No more than 24 credit hours of courses taken pass/fail may be applied toward an undergraduate degree.

School/College Rules - Undergraduate Students

| Architecture | All courses taken to fulfill the architectural professional program requirements must receive a letter grade. Only open elec- <br> tives may be taken pass/fail. |
| :--- | :--- |
| Arts and Sciences | Liberal Arts Core, major and minor classes cannot be taken pass/fail. |
| Education | Some courses must be taken pass/fail (e.g., EDU 508). These courses are not included in the 24-credit maximum ap- <br> plicable to an undergraduate degree. |
| Engineering and Computer <br> Science | Only free-elective courses at the 300-level and above or physical education courses may be taken pass/fail. Students are <br> not permitted to have more than 18 credit hours of pass/fail electives in their complete program. |
| Information Studies | A pass/fail course may not be used to satisfy any requirement. Pass/fail courses can be used only as free electives. |
| Management | Sophomores, juniors, and seniors may use the pass/fail option for one class per semester. The course must be 300-level or <br> higher and must be a free elective or a course from groups I, III, IV, or V on the degree check sheet. <br> Matriculated Fall 2015 or later: Sophomores, juniors and seniors may use the pass/fail option for one class per semester. <br> The course must be 300-level or higher and must be a free elective or liberal arts elective only. |
| Public Communications | A pass/fail course may not be used to satisfy any requirement. Pass/fail courses can be used only as free electives. |
| Sport and Human Dynamics | A maximum of 6 general elective credits may be taken pass/fail toward a degree. SWK 435 and 445 (Field Practicum I <br> and II) are graded pass/fail by school policy. |
| University College | Bachelor of Professional Studies students. A pass/fail course may not be used to satisfy any requirements. Pass/fail <br> courses can be used only as electives. A maximum of 12 credit hours of pass/fail courses may be used toward the degree <br> program. |
| Visual and Performing Arts | Only elective courses may be taken pass/fail. No studio courses may be taken pass/fail. |

## RM (Remedial)

RM courses count toward credit hours carried in a
particular semester, and are included in the total credits earned, but, do not count toward credit hours earned for the degree program except by
petition (see Credit, Calculation of credit hours, Undergraduate Students).

## WD (Withdrew)

After the academic drop deadline, and until the withdrawal deadline for the term, you may withdraw from a course and have a grading symbol of WD recorded on your transcript.

## Reporting Grades/ Grading Symbols

Instructors are required to submit grades or appropriate grading symbols for all students in their courses. If a student has not completed all course requirements by the time the instructor must report final grades, then the grade is determined based on work completed to date, counting unsubmitted work as zero, unless the student has made prior arrangements to receive an Incomplete.

## Missing Grades

Missing grades do not calculate toward the GPA. You may graduate with missing grades. After a degree has been certified, a missing grade may be recorded only if your home school/college determines that you completed all coursework before the degree award date, and only the evaluation and grade submission occurred after that date. Recording of a missing grade after a degree has been certified is subject to the approval of the University Registrar.

## Changing Grades

An instructor may elect to submit a grade change after the grade has already been reported. Grade changes must be reported to the department chair, the dean of the student's home school/college, and the Registrar's Office. Any or all of those offices may require an explanation of the change, and may require that additional information or forms be provided. All changes involving grading symbols must adhere to University policies and procedures. The Registrar's Office has final authority to approve changes that involve grading symbols. After a degree has been certified, a grade change may be recorded only if your home school/college determines that you completed all coursework before the degree award date, and only the evaluation and grade change submission occurred after that date. Recording of a grade change after a degree has been certified is subject to the approval of the University Registrar.
Grades may also be changed in the following circumstances:

- HEOP or SSSP students who receive grades of $D$ or $F$ during the Summer Start program will have these grades recorded as WD on the transcript; by petition a grade of C- may be changed to a WD.


## Removal of Incomplete

Incomplete (I) grades may be removed prior to graduation in one of two ways:

- complete the outstanding work specified on the Request for Incomplete Grade form by the agreed-upon date; or
- if you fail to complete the work specified in the Request for Incomplete Grade form, the Registrar's Office will post the letter grade indicated by the "If not completed..." statement, subject to any previous grading option that had been selected

Although you may not register for a course a second time for the purpose of removing an Incomplete grade, an instructor may require you to repeat certain elements of a course in order to remove the Incomplete.

## Incompletes and Graduation

You may graduate with outstanding Incompletes, if you've earned the required number of credits and met all degree requirements, and if your cumulative average equals or exceeds the minimum requirements for your school/college, with the Incompletes calculated as Fs.

After your degree has been certified, a grade may replace an Incomplete only when your home school/college determines that you completed all coursework before the degree award date, with only the evaluation and grade submission occurring after that date. Recording of the grade change from I to earned grade after a degree has been certified is subject to the approval of the University Registrar.

## Grade Appeals

Normal Practice for Course Grade Appeals The following set of general statements represents normal practice at SU* for a student seeking resolution to a grievance of a course grade.

1. The assignment of grades at SU is the responsibility of the faculty; once assigned by a member of the faculty, a grade cannot be changed without his or her consent, except by due process as detailed below. In cases where the instructor of record is not a member of the faculty, the faculty member charged with oversight of that instructor is ultimately responsible for the assignment of grades.
2. A course grade is based upon the instructor's professional assessment of the academic quality of the student's performance on a body of work. Such assessments are non-negotiable, and disputes about them do not constitute valid grounds for an appeal. Valid grounds can arise, e.g., when an instructor fails to provide or implement uniform and consistent standards,
or bases an assessment on criteria other than academic performance.*
3. Unless there are issues of a personal nature, the appeal process for a grade dispute begins with the instructor of record. Failure to comply with this may be grounds for denial of subsequent appeals. Any appeal beyond the instructor of record must be initiated in writing to the department chair before the last day of classes of the academic year semester immediately following the one in which the aggrieved grade was received by the Registrar. This written appeal should describe the basis for the grievance, the informal steps taken to resolve the dispute, and the remedies sought.
4. If satisfaction is not obtained at this or any subsequent level, the appeal always moves to the next level of authority. The levels in succession are: the instructor of record, faculty member in charge of the course, the department chair of the faculty member, the dean of the department chair.
5. At each level of appeal, a fair and thorough hearing of all views is sought before a decision is made. This may, but need not, require a face-to-face meeting of the parties directly involved in the dispute. A decision may be reached if both student and instructor agree. If such a decision cannot be reached, a panel designed by the college for this purpose shall hear the case. Details of the operation and manner of selection of this panel may vary by school or college**, but shall conform to the following guidelines:
a. The panel shall have a quorum of at least three.
b. All voting members of the panel shall be tenured faculty.
c. No member of the panel shall hear a case who has been involved in a previous stage of the appeal.
d. Membership of the panel shall be fixed and made public in a given academic year, though replacements may be made in the event of resignations.
e. Membership of the panel shall be approved by the faculty of the school or college, or by a representative group of the faculty, in each academic year.
f. The Senate Committee on Instruction shall approve the manner of selection and charge of a school or college's panel before its first case. The committee shall also approve any subsequent changes in the manner of selection or charge of each college or school's panel. The panel may, at its discretion, meet with the aggrieved parties either separately or together. The decision of this panel, either to deny the

## UNDERGRADUATE COURSE CATALOG

student's original appeal or to authorize the Registrar to change the grade, shall be final. The panel shall inform both the student and the instructor of its decision in writing. The panel shall also summarize the case and its outcome in a written report to the Senate Committee on Instruction. Said committee may include summary statistics on grade disputes in its final report to the Senate.
6. The only grounds for any further appeal shall be irregularities in the above procedures.
7. In such cases, either party may appeal the final decision of the faculty panel to the Senate Committee on Instruction. The Senate Committee on Instruction may either deny the appeal or insist that the procedure begin anew at the point the irregularity occurred.
8. All stages of the appeal process shall be kept
confidential to the maximum extent possible, consistent with the Family Educational Rights and Privacy Act.

* For further guidance, consult the bylaws of the individual school or college.
** These procedures do not apply for students in the College of Law.


## Grade Point Average

SU grade point average (GPA) is calculated by taking the number of grade points earned and dividing by the number of credit hours carried toward the GPA. Various GPAs, e.g. cumulative GPA and semester GPAs are calculated and used for a variety of purposes. Schools/colleges can advise about GPA calculations used to determine satisfactory progress, etc. See TABLE I and TABLE $J$ for grade and grade symbol listings and their
associated grade point calculations. Missing grades are not counted in GPA calculation. GPA average is calculated to three decimal places. GPA is not rounded.

## Graduation

Undergraduate students must earn a minimum cumulative GPA of 2.000 in order to be awarded an SU degree. Graduate students must earn a minimum average of 3.000 for work comprising the program for the degree or certificate and a minimum cumulative GPA of 2.800 .

## Honors

The University recognizes exceptional undergraduate achievement through various honors. Certain honors are imprinted on transcripts and diplomas after degree certification.

## Dean's List

## Undergraduate Students

Full-time students are eligible for the dean's list of their home school/college at the end of each semester.

| School/College | Requirement |
| :--- | :--- |
| Architecture | Minimum GPA of 3.500 for 12-14 letter-graded credit hours taken on campus or a <br> minimum GPA of 3.200 for 15 or more letter-graded credit hours taken on campus. |
| Arts and Sciences, Education, Engineering and Computer Science, <br> Information Studies, Management, Sport and Human Dynamics, and <br> Visual and Performing Arts | Minimum GPA of 3.400 and a minimum of 12 credit hours of letter grades with no <br> missing or Incomplete grades. |
| Management | Minimum GPA of 3.600 and a minimum of 12 credit hours of letter grades with no <br> missing or incomplete grades. |
| Public Communications | Minimum GPA of 3.500 and a minimum of 12 credit hours of letter grades with no <br> missing or Incomplete grades. |
| University College | UC students are eligible for the dean's list at the end of each semester (excluding sum- <br> mer) if they earn a 3.400 GPA in the last 12 credit hours taken and have been enrolled <br> in consecutive semesters. |

## University Scholars

The Syracuse University Scholars Selection Committee selects eight to 12 seniors each year as University Scholars.

## Renee Crown University Honors Program

"Renée Crown University Honors" will be noted on your diploma and transcript if you complete the requirements of the Honors Program.

## University Honors

You will receive your degree with University honors if your cumulative GPA meets the following standard:

GPA Requirement

| Cum laude | 3.200 for Architecture |
| :--- | :--- |
|  | 3.400 for all other schools/col- <br> leges |
| Magna cum <br> laude | 3.500 for Architecture |


|  | 3.600 for all other schools/col- <br> leges |
| :--- | :--- |
| Summa cum <br> laude | 3.800 |

Cumulative GPA requirements for honors must be equal to or greater than those noted above; no rounding up is permitted. A minimum of 60 credit hours taken at SU is required for honors. Generally, physical education courses and ROTC credit are not included in calculating honors. Check with your school/college dean's office to determine how your GPA will be determined.

School/College Rules
Arts and Sciences, Information Studies, and Management
University honors is based on a minimum of 60 credit hours of letter-graded courses taken at SU.
University College Associate's degree recipients are not eligible for University honors.

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## Departmental Distinction

Students earn distinction in particular programs of study by meeting the specific criteria for distinction in that major. Departmental or program distinction recognizes exceptional achievement that exceeds normal expectations for graduates within the program. This will be noted on the transcript after the degree has been awarded.

## Internal Transfer

Graduate Students

Graduate students may change their degree program if the transfer is approved by the new program. Graduate students wishing to initiate any kind of change in degree program, whether transferring between programs or undertaking concurrent graduate degree programs, must
consult their funding sources as to the effect the proposed change may have on their eligibility for continued funding.

## Intra-University Transfer

Undergraduate Students

Students transferring to other schools/colleges within the University (intra-University transfer) must meet the admission requirements of the new school/college that were in effect at the time of matriculation into the University. Requests for internal transfer requests must be received before the financial drop deadline of the current term. Any requests received after that date will take effect the next semester. Schools and Colleges still have the ability to set their own internal
deadlines for processing and approval in order to meet this deadline. Until an IUT is approved, students may not be able to register for courses in the new program. See TABLE K for school/collegespecific information.

The new school/college of enrollment will reevaluate all SU, transfer, and other credit you have received. If you were previously matriculated at SUNY ESF and took SU courses during that time, your school/college, at its discretion, may include those SU courses in manual calculations for determination of intra-University transfer eligibility.

Full-time students transferring to University College may register for up to 11 credit hours during the first semester after the transfer. Students registered in a main campus school/ college during the spring semester may not transfer to University College for the purpose of summer study.

## TABLE K Intra-University Transfer Standards

| New School/College | Conditions |
| :---: | :---: |
| Architecture | 3.0 GPA. Applicants are expected to complete one of MAT 221, MAT 285, MAT 295 or PHY 101. No midyear transfers. Interview and portfolio review required. Application deadline: Friday preceding spring break. |
| Arts and Sciences | Students interested in applying for transfer must attend an informational session. These sessions are held throughout the semester. Visit http:/casadvising.syr.edu for the schedule. For automatic transfer to The College, applicants must be making satisfactory progress and have a current cumulative SU GPA of at least 3.0. The College will consider applications from, but not guarantee admission to, students with a GPA below the 3.0 minimum. Such students must submit a letter with their application that explains their previous academic difficulties, the major they are interested in pursuing, and why they believe they will be successful in The College. Students who are approaching junior standing are required to submit a completed declaration of major form with their application. Incomplete applications will not be considered. Application deadline are July 15 for fall semester entry and December 15 for spring semester entry. Applicants will be notified by email before the start of the semester. |
| Education | Minimum cumulative GPA of 3.0 for inclusive and special education, inclusive early childhood special education, health and exercise science, English education, mathematics education, science education, social studies education, Spanish education, art education, music education, physical education, and health and physical education; 2.8 for selected studies in education. Students who meet department criteria will be admitted on a space-available basis. An interview with an assistant director of academic advising may be required, and all applications are held until the end of the semester. |
| Engineering and Computer Science | 3.0 GPA. Applicants are required to complete at least one of MAT 295, 296, or 397 (with a grade of B or better) and science (by completing at least one set of PHY 211/221 or CHE 106/107 with a grade of B or better). Students who wish to major in computer science must also complete CIS 252 with a grade of at least a B. |
| Information Studies | Cumulative GPA of 3.2. Students must earn at least 15 credits in courses graded A-F at Syracuse before transferring. Transfers will normally take place at the beginning of the sophomore year. (Depending upon available spaces, students with GPAs below 3.2 may be considered after completion of IST 195 and IST 233 with grades of B or higher. However, there may be times when GPA requirements will be higher than 3.2 due to space considerations.) They must also meet other criteria as determined by the faculty of the School. |
| Management | To be considered eligible for transfer, students must have completed at least 30 credits at Syracuse University (two academic semesters), including two of the following or their equivalents: MAT 221 , MAT 284 , and ECN 203 . These students are admitted as space becomes available and considered based on the following criteria: cumulative GPA, rigor of academic coursework taken at SU, engagement on and off campus, and an optional professor recommendation. Whitman only admits students for the fall semester - admissions decisions are made over the summer. Students interested in transferring are required to attend an Information Session and meet with an advisor in the Whitman School's Office of Undergraduate Programs. All application requirements must be completed by the last day of the semester of their freshmen year, no summer coursework will be considered. Decisions will be made by a committee over the summer and communicated to all applicants. |
| Public Communications | Applicants must complete a minimum of 30 graded (not P/F) credits at SU before they are eligible for internal transfer. Admission is based upon a student's cumulative Syracuse GPA. Applicants who meet the minimum credit qualifications are rank-ordered by GPA and admitted in that order, highest to lowest, until all seats are filled. The cumulative GPA includes all courses taken at SU. The GPA required for admission varies each semester, depending upon the number of spaces available and the number and strength of the applicants. Because Newhouse majors require a minimum of four semesters to complete, juniors and seniors are ineligible to transfer. (A junior is defined as a student who has earned 54 credits.) Application deadlines are Dec. 15 for spring admission and May 1 for fall admission. |

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| Sport and Human <br> Dynamics | GPA variable, depending on major. Departments may have additional criteria. Applicants are required to discuss tentative transfer <br> plans with the academic chair or director of the proposed program of study. Students who meet department criteria will be admitted <br> on a space-available basis. Transfer requests may be held until the end of the semester. |
| :--- | :--- |
| University College | GPA variable, depending on major. Probation students accepted pending the approval and recommendation of the student's school/ <br> college. |
| Visual and Performing <br> Arts | 3.0 cumulative GPA required for all programs. Additional requirements: Portfolio for art, design and/transmedia; audition for drama <br> and music; essay for Bandier program; questionnaire for communication and rhetorical studies (CRS). Application deadlines end of <br> the semester for all programs except CRS. For CRS Oct. 15 only for spring admission and Mar. 15 for fall admission. Admission for <br> all programs on a space available basis. |

## Leave of Absence, Withdrawal and Readmission

If you leave the University before completing your degree requirements, you must file for an official leave of absence, whether or not you intend to return to SU. If you register but then leave without notifying the University, you will continue to incur tuition, room, board, and other charges. On your transcript, course registrations will remain and any grades or grading symbols submitted by your instructors will appear. If you don't register at all, the notation "Discontinuation -- non-attendance" will appear on your transcript. Discontinued students must follow formal readmission procedures.

## Leave of Absence

Undergraduates initiate the leave of absence process through their school/college undergraduate office. Graduate students file an Official Leave of Absence/Withdrawal form through their academic department. A leave of absence is not available to a student who has a pending disciplinary action.

## Medical Leaves of Absence

Students leaving the University for medical and/ or psychological reasons must go through the Office of Student Assistance, 306 Steele Hall, and obtain approval of Health Services and/or the Counseling Center for a medical leave to take effect. If extraordinary circumstances exist, you may apply to the appropriate department/school/ college for retroactive approval of a medical leave
of absence. This application must be made within 60 days of your last date of class attendance.

## Military Leaves of Absence

Undergraduates being activated by the military should initiate a leave of absence procedure through the home school/college undergraduate office; graduate students should contact their academic department. The dean's office or academic department will advise about options to drop courses, take class standing grades, or take Incompletes, as well as the academic implications of these options.

## Withdrawal

SU will officially withdraw students who are suspended for academic or disciplinary reasons; the suspending school/college or the Division of Student Affairs will initiate the withdrawal. A student who chooses to leave the University rather than participate in the judicial or academic integrity review process will be classified as having been withdrawn for disciplinary reasons. The University may also withdraw students for medical reasons or for academic integrity violations. Officially withdrawn students lose matriculation status; however, matriculation may be reinstated if all requirements for readmission are met (see Readmission/Termination of Leave of Absence).
Enforced Medical Withdrawal An enforced medical withdrawal may be imposed in response to behavior that has its basis in a psychological or other medical condition including, but not limited to, situations in which a student fails to attend and participate actively in an appropriate assessment, educational program, or other intervention; and situations in which student behavior poses a significant health or safety risk
to the student or others. The senior vice president and dean of student affairs, or one or more of her/his designees will make the determination that an enforced medical withdrawal should occur, consistent with the process enumerated in the University Judicial System Handbook.

Academic and Financial Implications of Leaves and Withdrawals
For academic and financial purposes, the effective date is either the date the Official Withdrawal/ Leave of Absence form is approved by the undergraduate home school/college or the graduate student's department, or the day after the end of the current semester, whichever is later.

You can't receive Incomplete grades for courses in which you were enrolled if you take a leave of absence or are withdrawn; only grades of WD or F can be recorded on your transcript. If you register for a future semester and subsequently take a leave of absence or are withdrawn, then your registration for that semester will be canceled.

Transcript Notation and Effective Date Leaves of absence and withdrawals will be noted by effective date on the transcript. The transcript notation for leaves of absence is "Leave of Absence-- Student Initiated," and for withdrawals, "Withdrawal-- University Initiated." The transcript will be marked with "violation of academic integrity policy" when an established violation results in suspension or expulsion. This designation will be permanently retained on the transcript.

You are responsible for initiating any requests for refund, including those that result from medical leaves. See TABLE L and Tuition, Fees and Related Policies for the complete statement of SU's policy and requirements for refunds for withdrawals and leaves of absence.

## TABLE L Academic and Financial Effects of Dropping or Withdrawing From a Course, Leaves of Absence, and Withdrawal from the University

| Action | Date | Effect on Transcript | Effect on Financial Aid | Effect on Tuition and Fees |
| :--- | :--- | :--- | :--- | :--- |
| Drop a class, take a leave <br> of absence, or be with- <br> drawn from the University | On or before the financial drop dead- <br> line (in fall and spring, three weeks <br> from the first day of classes for regular <br> session or the class-specific deadline <br> for flexible format classes) | Class(es) dropped | For leaves and withdraw- <br> als, all financial aid is <br> canceled. | All charges, except the non- <br> refundable portion, will be <br> refunded. |

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| Drop a class, take a leave <br> of absence, or be with- <br> drawn from the University | After the financial drop deadline and <br> on or before the academic drop dead- <br> line of the class 3 | Class(es) dropped ${ }^{2}$ | For leaves and withdraw- <br> als, see footnote. ${ }^{1}$ No <br> adjustments are made <br> for individual dropped <br> classes. | For individual dropped classes, <br> all charges remain. For leaves <br> and withdrawals, see footnote. ${ }^{1}$ |
| :--- | :--- | :--- | :--- | :--- |
| Withdraw from a class, <br> take a leave of absence, <br> or be withdrawn from the <br> University | After the academic drop deadline <br> and on or before the class withdrawal <br> deadline | Class(es) remain(s) <br> on transcript with <br> withdrawal (WD) grading <br> symbol 2 | For leaves and withdraw- <br> als, see footnote. ${ }^{1}$ No <br> adjustments are made <br> for individual dropped <br> classes. | For individual classes, all <br> charges remain. For leaves and <br> withdrawals from the University, <br> see footnote..$^{1}$ |
| Take a leave of absence <br> or be withdrawn from the <br> University | After the course withdrawal deadline | All classes graded " $\mathrm{F"}^{2}$ | For leaves and withdraw- <br> als, see footnote. ${ }^{1}$ No <br> adjustments are made <br> for individual dropped <br> classes. | See footnote. ${ }^{1}$ |

${ }^{1}$ Federal regulations governing refunds and adjustments to federal financial aid, and adjustments to institutional scholarships and grants require careful review. Please see the current Tuition, Fees \& Related Policies for details.
2 Classes completed before the effective date of the leave of absence or withdrawal may be graded.
3 University College students should consult the Part-Time Studies Course Schedule for interim dates and deadlines.

## Readmission

If you plan to re-enroll at SU, you must apply for readmission. Approval of your readmission may be affected by any of the following conditions:

- Your school/college and program must have available space to accommodate your inclusion.
- You may need to satisfy new requirements in your academic program or even change your major, depending upon curricular changes that may have occurred during your absence. Your school/college and/or department will determine the available options.
- You must meet all outstanding SU financial obligations.
- To be eligible for financial aid you must meet Satisfactory Academic Progress standards. http://www.syr.edu/financialaid/policies/ index.html
- If your leave/withdrawal was conditional, you must resolve the appropriate issues and obtain readmission approval from the academic unit or office that authorized or required your leave/ withdrawal.

If you left the University without requesting an official Leave of Absence, you must follow formal readmission procedures as set by your school/ college.

Readmission is effective the first day of the approved semester.

After your readmit has been approved and processed, you may register for the readmit semester during the regular registration period, during the schedule adjustment period prior to the start of the semester, or on the registration day for new students at the beginning of the readmit semester.

Undergraduate Students
If you are applying for readmission following an academic withdrawal:

- Arts and Sciences, Education, Public Communications, Sport and Human Dynamics, and Visual and Performing Arts students are eligible to apply for readmission after one academic year from the date of an academic withdrawal. In addition, some Sport and Human Dynamics students may be eligible for fasttrack readmission (see the college's policies).
- Other schools/colleges allow readmission applications after one calendar year from the date of an academic withdrawal.
- Your school/college may place you on academic probation for the first semester after you are readmitted.

If you are readmitted to SU, you will regain your matriculation status, unless you are readmitted to University College as a special student.

Special Student Status After an academic dismissal, with home school/college and University College approval, you may apply for readmission and transfer to University College as
a special student. Special students are limited to a maximum registration of six credit hours in the first semester at University College. You may apply for readmission and transfer to a main campus school/college after earning a minimum of 12-15 credits with a minimum cumulative GPA of 2.0.

Arts and Sciences students must obtain permission from Arts and Sciences before applying for special student status through University College. This process requires an interview and a contract.

## Majors

## Undergraduate Students

A major program consists of a minimum number of credit hours of junior- and senior-level courses in a formally approved program of study. The purpose of the major is to provide depth of knowledge and competence in a subject area of special interest. You must declare a major and complete all requirements of the major in order to earn an SU degree.

Each school/college determines the courses, number of credit hours, and other requirements for its major programs of study. You must apply for and be accepted into a major by the beginning of your junior year. If you don't officially declare a major by the start of the registration period at the end of the first semester of your junior year, you will be prevented from registering for the next term.

In the following schools/colleges the indication of intended major on the application for admission and/or intra-University transfer is unofficial.

| School/College | Notes |
| :--- | :--- |
| Arts and Sciences | There are specific procedures for being formally admitted to a major. Students declaring a major are considered to be <br> pursuing the B.A. (Bachelor of Arts) degree. Students who wish to pursue the B.S. (Bachelor of Science) degree in Arts and <br> Sciences must petition the department offering the major to be formally accepted as a candidate. Of the upper-division <br> credits counted toward the completion of a major, at least 12 must be SU letter-graded course work. |

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Management, Visual and Per- $\quad$ There are specific procedures for being formally admitted to a major.
forming Arts, University College

## TABLE M Double Majors (In Single Degree Programs)

| School/College | Notes |
| :--- | :--- |
| Architecture | Students may not have a double major. |
| Arts and Sciences | A maximum of six credits of coursework at the 300 level or above may overlap among all majors and minors. For each ma- <br> jor program, all but six credits of upper-division coursework counted toward that major must be exclusive to that major. Arts <br> and Sciences students who pursue a major in another school/college must earn a minimum of 96 credits in the College of <br> Arts and Sciences. |
| Engineering and Computer <br> Science | Completion of a second Engineering and Computer Science major within the college requires completion of all program of <br> study requirements for each major. Students pursuing any combination of double majors where one or both are Engineering <br> and Computer Science majors must complete the Engineering and Computer Science programs of study in their entirety. |
| Management | To complete a double major in Management, students complete all required courses for each major. Courses that are ap- <br> plicable to multiple majors may only be used to fulfill the requirements of one major. General Management Studies cannot <br> be one of the majors in a double major program for Management students. Double majors outside Management usually <br> require completion of additional credits. <br> Management majors are not available to singly enrolled students in other schools/colleges. |
| Public Communications | Public Communications students may only have one major in the School of Public Communications. <br> Public Communications majors are not available to singly enrolled students in other schools/colleges. |

## Minors

Undergraduate Students
Minors provide a systematic opportunity to focus
on an area of interest. Minors may be required as part of a degree program, or they may be selected voluntarily. Because of limited space in highdemand courses, admission to some minors may be restricted. The proportion of liberal arts and
sciences courses required for the degree must be maintained, and minors that are too closely related to your major will not be approved. Minors require a minimum of 18 credit hours, 12 of which must be in 300- to 400-level coursework.

School/College Rules

| School/College | Rules |
| :--- | :--- |
| Arts and Sciences | At least 15 of the credit hours for a minor must be SU letter-graded coursework. A maximum of six credits of coursework at <br> the 300 level or above may overlap among all majors and minors. For each major or minor program, all but six credits of <br> upper-division coursework counted toward requirements must be exclusive to that program. |
| Education | Minors must be declared by the end of the junior year or 6th semester of study. |
| Management | Must be declared by the end of the Sophomore year or 4 $4^{\text {th }}$ semester of study. All 18 credits must be letter-graded course- <br> work taken at Syracuse University. |

The department or school/college offering the minor determines the requirements, and any exception to the minor requirements must be granted by petition through the sponsoring unit.

Once your school/college has certified completion of both your degree and your minor, the minor will appear on the transcript.

## Registration

You must be officially registered in order to attend classes. You may not attend, audit, be evaluated or otherwise participate in courses without being officially enrolled. An instructor may not allow you to attend classes and/or submit work unless your name appears on the official class list or unless you are attending with the instructor's approval for the purpose of making up an Incomplete. Registration may be prevented for financial, academic, or other reasons.

You must register for classes in the semester in which you begin work for those classes. You may not attend a class without officially registering, and then register for the class as if it were taken in a subsequent term, either for financial
reasons or for scheduling convenience. Advisors and faculty should not advise such actions, and students are held to the policy even if such advice or permission is given. If you do not register appropriately and grades are later reported for recording on your transcript, you'll be dropped from the later course registration and retroactively registered in the term during which you actually took the course. The Bursar's Office will adjust tuition and fees to those in effect at that time.

The same rule also applies to internships taken for credit, independent study, experience credit, etc.: You must register during the semester or summer session in which work begins. Retroactive registration is not permitted for such work done without faculty oversight.
Before you register, you will need to clear all holds. If outstanding bills are not paid by Aug. 1 for fall semester, and by Dec. 15 for spring semester, your early registration for the next semester may be canceled and you will be unable to re-register until the semester begins. Your current semester's registration may be canceled if you have not met the University's immunization requirements.

New students register just before the term begins.

Returning students are eligible to register for the next semester during the registration period at the end of fall and spring semesters. Part-time students register through University College or, for the School of Education's Extended Campus courses, through Extended Campus. Adding of courses or entire registrations after the late registration and add deadline may be done by petition only.

SUNY College of Environmental Science and Forestry and SUNY Upstate Medical University Courses: Because of the University's relationship with SUNY ESF and SUNY UMU, you may take courses at those institutions with the approval of your SU school/college/academic department, subject to availability and fulfillment of any specific requirements. Conversely, SUNY ESF and SUNY UMU students who meet course requirements may take SU courses, subject to availability and in accordance with the rules and approval of their home institution.

# Maximum Course Load (Fall and Spring) 

## Graduate Students

The maximum course load for graduate students is 15 credits each semester. In some part-time programs the maximum course load may be lower. Registration for additional credits requires a petition and approval of your academic department.

## Undergraduate Students

Full-time undergraduate students typically register for 12-19 credits per semester. Students in good standing in the Renée Crown University Honors Program may register for more than 19 credits without approval of their home school/college. Other students may petition their home school/ college to register for more than 19 credits. Undergraduates registering for more than 19 credit hours will be assessed the appropriate extra tuition charges, unless they qualify for an overload rate exception.

## Summer Registration

University College coordinates all summer registration for returning and visiting students. Matriculated SU students in good academic standing, as well as visiting and non-matriculated students, are eligible to register for summer sessions. Undergraduate students who were fulltime during the spring semester and who intend to register as full-time during the fall semester may not transfer to part-time continuing education status for the summer.

## Maximum Course Load (Summer)

## Graduate Students

Graduate students may register for a maximum of 6 credits in a six-week session (with Maymester and Summer Session I considered as one session for this purpose), and a maximum of 12 credits in any summer. In some full-time programs the maximum course load may be higher and in some part-time programs the maximum course load may be lower. Registration for credits above the maximum set by your program requires a petition and approval of your academic department.

## Undergraduate Students

Undergraduates may register for a maximum of 7 credits in a six-week session (with Maymester and Summer Session I considered as one session for this purpose), and a maximum of 14 credits
in any summer. Students may petition their home school/college to register for additional credits in a session or for summer.

## Graduate Students

 Taking UndergraduateLevel CoursesPrior to registration, graduate students may petition to register for an undergraduate-level course, with the exception of PED courses, which do not require a petition. An undergraduate course taken by a graduate student appears on the graduate section of the transcript. The course counts toward overall credit and GPA calculations on the transcript, unless flagged to remove it from calculation (see Flagging section, Graduate Students). However, an undergraduate-level course does not fulfill graduate degree requirements.

## Undergraduates Taking Graduate-Level Courses

Registration for a graduate-level course is subject to a variety of restrictions, depending upon how the course is intended to apply toward your undergraduate or graduate degree requirements. Taking a graduate course as restricted graduate credit, with the intention of later applying it toward a graduate degree or certificate program, requires prior approval.
A graduate course taken by an undergraduate appears on the undergraduate section of the transcript and the course is graduate level, and the course counts toward overall undergraduate credit and GPA calculations. However, a graduatelevel course neither fulfills undergraduate degree requirements (unless it has specifically been approved for that purpose, either as part of the degree program's requirements or by petition prior to registration), nor does it count toward calculations for certification, e.g., for University honors.

## Changes to Registration

You may make changes to your registration after the semester begins, adding, dropping, or withdrawing from classes in accordance with published deadlines. Courses with nontraditional start and/or end dates have different deadlines than full-semester courses. While the student normally initiates registration and subsequent changes, the student's school(s)/college(s) of enrollment may also initiate such actions. Instructors also have the option to administratively drop students who do not attend the first week of classes (up to and including the add deadline). The administrative drop option for instructors is
not available in Maymester.
The Health Center or the Bursar's Office may cancel your registration. No other University persons or units may make substantive changes to an undergraduate student's schedule of classes without first securing the formal permission of your home school/college.

## Religious

 Observances, Policy OnSU recognizes the diverse faith traditions represented among its campus community and supports the rights of faculty, staff, and students to observe according to these traditions. Students are asked to consider that it is more difficult to arrange appropriate accommodations in some kinds of courses, e.g., those that have certain kinds of laboratories or a significant experiential learning component, so students should consider their need for accommodation for religious observances as they plan their schedule each semester. Students should recall that not every course is offered every academic year and that the catalog indicates how frequently each course is offered.
Faculty are asked to make appropriate accommodation for students' observance needs by providing an opportunity to make up any examination, study, or work requirement that is missed because of an absence due to a religious observance, provided the instructor has been notified no later than the end of the second week of classes. No fees will be charged to the student for the costs incurred by the University for such make-up work. If a faculty member is unwilling or unable to make an appropriate accommodation, the student should consult his or her academic dean.

## Research Involving Human or Animal Subjects

Students are required to submit copies of any research proposal that involves human subjects to the Institutional Review Board (IRB) for review. No research or teaching using live vertebrate animals may be undertaken until the protocol is approved by the Institutional Animal Care and Use Committee (IACUC).

# Residency <br> Requirement 

All students must complete a minimum number of credit hours at SU in courses offered through duly registered programs in order to be granted a Syracuse University degree.

## Graduate Students

Master's degree candidates must take at least 70 percent of credit hours for the degree while at SU. See Calculation of Credit Hours Toward Degree Requirements for school/college-specific exceptions.

Doctoral students must take at least 50 percent of coursework, exclusive of dissertation, in courses offered through an SU-registered graduate degree program. Experiential learning credit and professional experience courses don't count toward the residency requirement.

## Undergraduate Students

You must take at least 30 credit hours of coursework at SU to qualify for the degree; in most cases more than 30 credits will be required in order to fulfill degree requirements. Work necessary to complete a major must be completed at SU unless a waiver is granted by the appropriate major department. SU courses taken while a student is matriculated at SUNY ESF do count toward the residency requirement. ESF courses taken while a student is matriculated either at SUNY ESF or at SU do not count toward the SU residency requirement.
University College Candidates for associate's degrees, bachelor of liberal studies degrees, or bachelor of professional studies degrees must complete a minimum of 30 credit hours of SU coursework while enrolled as part-time students at University College. Credits earned at SU while enrolled as a full-time student do not count toward this requirement.

## Retaking Courses

Some programs require the retaking of courses in which unsatisfactory grades (as defined by the program) were earned. Retaking courses may also be prohibited under certain circumstances.

- Language courses A course cannot be retaken once you have successfully completed a higher level course in the same language.
- Mathematics courses A course cannot be retaken once you have completed a higher level course in the same mathematics curriculum sequence with a grade of C or better.
Table A describes other rules for undergraduates who want to retake courses. Also see Flagging

Courses That Have Been Retaken. Note that retaken courses may not count toward eligibility and satisfactory progress requirements for certain types of financial aid awards.

## Graduate Students

You may retake a course in which you earned a grade of C+, C, C- or F, with the approval of your academic unit and the Graduate School. Graduate courses may be retaken only once. A retaken course replaces the original course on your degree program of study, but both the original course and the retaken course will appear on your transcript and both courses will calculate, unless the original course is flagged.

## Student Academic

 WorkStudent work prepared for University courses in any media may be used for educational purposes, if the course syllabus makes clear that such use may occur. You grant permission to have your work used in this manner by registering for, and by continuing to be enrolled in, courses where such use of student work is announced in the course syllabus.

After you have completed such courses, any further use of your work will meet one of the following conditions:

- the work will be rendered anonymous by removing all of your personal identification, or - your written permission will be secured.

As a generally accepted practice, dissertations, graduate theses or research projects, honors theses, or other capstone projects submitted in partial fulfillment of degree requirements are placed in the library, University Archives, or department for public reference.

## Student Status

## Enrolled Students

A student is considered enrolled at the University until one or more of the following occurs: (1) the student graduates; (2) the student takes a leave of absence; (3) the student is withdrawn from the University for academic, medical or disciplinary reasons; (4) the student fails to register; or (5) the student's registration is cancelled by the University.

## Matriculated Students

A matriculated student is defined as one who has applied for, been formally admitted to, and has registered for one or more courses in the degree
or certificate-granting program to which he/she has been admitted. You must be matriculated to receive a degree or certificate from the University. Students who take an official leave of absence maintain matriculation status.

## Non-Matriculated Students

Non-matriculated students are held to the same academic standards as matriculated students.

A non-matriculated graduate student is one who has earned a bachelor's degree at SU or elsewhere, but has not been formally admitted to a degree or C.A.S. program at SU. This status applies whether registering for graduate or undergraduate courses.

A non-matriculated undergraduate student is one who has neither earned a bachelor's degree nor been formally admitted to the University.

- Undergraduates who are academically dismissed from a school/college and accepted into University College as "special students" are considered non-matriculated.
- Taking courses at University College does not imply matriculation, since you must be formally admitted to an SU degree program in order to become matriculated.
- Students who are withdrawn from the University become non-matriculated. Upon readmission, matriculation status is regained.


## Full-Time and Part-Time Status

The University's certification of a student's status is based solely on the criteria stated in this rule. Students who meet SU's requirements for full-time or part-time status may not meet requirements for such status as defined by other agencies or institutions. Conversely, students who do not meet the University's requirements for full-or part-time status may be considered full-time or part-time by other agencies.

## Graduate Students

## Full-time

A graduate student is considered full time under any one of the following conditions:

[^1]registered for fewer than 9 credits but for at least 0 (zero) credits of thesis, dissertation, or degree in progress for the semester and engaged, at a level equivalent to full-time study in one or more of the following activities as certified by your program.

0 studying for preliminary, qualifying, or comprehensive exams

0 studying for a language or tool requirement
0 actively working on a thesis or dissertation
0 an internship
A law student is full-time if enrolled for 12 credits in a fall or spring semester. If matriculated in a joint/dual degree program that includes the J.D. degree, then the law requirement for full-time status takes precedence over the 9 credit criterion for full-time status as stated above.
*Syracuse University considers 9 credits per term to be full-time study for graduate study. The New York State Education Department, based on NYS Education Law and the Regulations of the Education Commissioner, define full-time study to be 12 credits per semester for educational requirements for state academic awards and loans.

## Part-Time (Fall, Spring, and Summer)

Graduate students who do not meet the requirements for full-time status are considered part time.

## Undergraduate Students

## Full-time (Fall, Spring, and Summer)

Undergraduates are full time if registered for 12 or more credits during any semester. Registration for 6 credits in a six-week summer session confers full-time status for the session.

## Part-time (Fall, Spring, and Summer)

Undergraduates enrolled for fewer than 12 credit hours are considered to be part time. Exception: Engineering and Computer Science Students registered in the Cooperative Education program for zero hours in semesters when they are on work assignments are considered to be full time.
The number of credit hours carried by a part-time student may affect eligibility for University housing and financial aid. For purposes of financial aid, students registered for 9-11 credit hours are considered three-quarter time: students registered for 6-8 credit hours are considered half-time students; students registered for $0-5$ credit hours are considered less than half time.

## Transcript

SU maintains a permanent academic transcript showing complete course and grade-earned information for every student, matriculated or nonmatriculated, who takes credit-bearing coursework through any SU program. The transcript may not be modified or selectively deleted for any reason, including ignorance of deadlines or academic rules. Once a degree is conferred, the transcript may not be changed except for subsequently discovered fraud or academic dishonesty, assessments that more accurately represent academic work completed prior to degree certification, or to correct administrative error. In extreme cases, such changes may include the rescinding of a degree.

Transcripts of courses taken and degrees received at SU are maintained by the Registrar's Office in accordance with the policies of the American Association of Collegiate Registrars and Admissions Officers. Official transcripts show the entire record of all coursework, both undergraduate and graduate, matriculated and non-matriculated. Undergraduate and graduate
transcript records print separately, but are issued and sent together for students with more than one SU academic career. Coursework is displayed chronologically within each career record, with one GPA calculation for the career. However, within that distinction the transcript is not degree-specific: i.e., it does not designate courses that apply to multiple specific degree programs at the same level. Such information may only be obtained from the student's school/college for undergraduate degrees; the academic department for graduate programs; or the College of Law for law degrees.
All courses taken at SU Abroad centers are listed on students' transcripts. Credit hours and grades are computed in the GPA in the same manner as any other Syracuse University courses. Courses taken through SU Abroad at foreign institutions may be listed on students' transcripts with credit hours and grades computed in the GPA in the same manner as any other Syracuse University course, or as transfer credit, as determined by SU departmental review. SU does not maintain a transcript record of SU courses taken by SUNY ESF students. For ESF students, ESF is the college of record. ESF courses taken by matriculated SU students appear on the SU transcript and calculate in the same way as SU courses, except for graduate students admitted to concurrent master's degree programs.
Syracuse University cannot provide copies of transcripts it has received from other institutions to third parties. Students must request transcripts from the originating institution.
Transcripts may be obtained from the Registrar's Office. SU reserves the right to withhold copies of transcripts of students who have unfulfilled financial obligations to the University or by request of the Office of Student Rights and Responsibilities.

Access to transcripts and other student records is protected by the Family Educational Rights and Privacy Act. (See Student Rights Under the Family Educational Rights and Privacy Act)

## UNDERGRADUATE COURSE CATALOG

## ACADEMIC OFFERINGS

Undergraduate Offerings

| OFFERING | MINIMUM CREDITS REQUIRED | HEGIS |
| :---: | :---: | :---: |
| Accounting |  | 0502 |
| B.S. | 122 |  |
| Accounting (Minor) |  |  |
| Acting |  | 1007 |
| B.F.A. | 124 |  |
| Addiction Studies (Minor) |  |  |
| Advertising |  | 0604 |
| B.S. | 122 |  |
| Advocacy and Public Rhetoric (Minor) |  |  |
| Aerospace Engineering |  | 0902 |
| B.S. | 128 |  |
| Aerospace Engineering/Business Administration (Combined U/G) |  | $\begin{aligned} & 0902, \\ & 0506 \end{aligned}$ |
| B.S./M.B.A. | 150 |  |
| African American Studies |  | 2211 |
| B.A. | 120 |  |
| African American Studies (Minor) |  |  |
| African American Studies (Tch Prep)/Social <br> Studies Ed: Prep 7-12 (5 Yr) (Combined U/G) |  | $\begin{aligned} & 2211, \\ & 2201 \\ & \hline \end{aligned}$ |
| B.A./M.S. | 150 |  |
| Animation (Minor) |  |  |
| Anthropology |  | 2202 |
| B.A. | 120 |  |
| Anthropology (Minor) |  |  |
| Anthropology (Tch Prep)/Social Studies Ed: Prep 7-12 ( 5 Yr ) Comined U/G) |  | $\begin{array}{\|l} \hline 2202, \\ 2201 \\ \hline \end{array}$ |
| B.A./M.S. | 150 |  |
| Applied Mathematics |  | 1703 |
| B.A. | 120 |  |
| B.S. | 120 |  |
| Applied Statistics (Minor) |  |  |
| Arabic (Minor) |  |  |
| Architecture |  | 0202 |
| B. Arch. | 162 |  |
| Architecture (Minor) |  |  |
| Art Education |  | 0831 |
| B.F.A. | 127 |  |
| Art History |  | 1003 |
| B.A. | 120 |  |
| Art History (Minor) |  |  |
| Art Photography |  | 1011 |
| B.F.A. | 129 |  |
| Art Photography (Minor) |  |  |
| Art Video |  | 1010 |
| B.F.A. | 129 |  |
| Arts and Sciences/Art |  | 1002 |
| B.A. | 120 |  |
| Arts and Sciences/Music |  | 1005 |
| B.A. | 120 |  |
| Asian/Asian American Studies (Minor) |  |  |
| Biochemistry |  | 0414 |
| B.S. | 120 |  |


| Bioengineering |  | 0905 |
| :---: | :---: | :---: |
| B.S. | 131 |  |
| Bioengineering/Business Administration (Combined U/G) |  | $\begin{aligned} & 0905, \\ & 0506 \end{aligned}$ |
| B.S./M.B.A. | 150 |  |
| Biology |  | 0401 |
| B.A. | 120 |  |
| B.S. | 120 |  |
| Biology (Minor) |  |  |
| Biology (Tchr Prep)/Science Ed (Biology):Prep 7-12 (5Yr) (Combined U/G) |  | 0401 |
| B.A./M.S. | 150 |  |
| B.S./M.S. | 150 |  |
| Biophysical Science |  | 0499 |
| B.A. | 120 |  |
| Bioprocess Science - ESF (Minor) |  |  |
| Biotechnology |  | 0499 |
| B.S. | 120 |  |
| Broadcast and Digital Journalism |  | 0603 |
| B.S. | 122 |  |
| Ceramics |  | 1009 |
| B.F.A. | 129 |  |
| Ceramics (Minor) |  |  |
| Chemical Engineering |  | 0906 |
| B.S. | 128 |  |
| Chemical Engineering/Business Administration (Combined U/G) |  | $\begin{aligned} & 0906, \\ & 0506 \end{aligned}$ |
| B.S./M.B.A. | 150 |  |
| Chemistry |  | 1905 |
| B.A. | 120 |  |
| B.S. | 120 |  |
| Chemistry (Minor) |  |  |
| Chemistry (Tchr Prep)/Science Ed (Chem): Prep 7-12 (5 Yr) (Combined U/G) |  | $\begin{aligned} & 1905, \\ & 1905 \\ & \hline \end{aligned}$ |
| B.A./M.S. | 150 |  |
| B.S./M.S. | 150 |  |
| Child and Family Studies |  | 1305 |
| B.S. | 124 |  |
| Child and Family Studies (Minor) |  |  |
| Chinese Language (Minor) |  |  |
| Chinese Studies (Minor) |  |  |
| Citizenship \& Civic Engagement |  | 2299 |
| Civil Engineering |  | 0908 |
| B.S. | 127-128 |  |
| Civil Engineering/Business Administration (Combined U/G) |  | $\begin{aligned} & 0908, \\ & 0506 \end{aligned}$ |
| B.S./M.B.A. | 150 |  |
| Classical Civilization |  | 0399 |
| B.A. | 120 |  |
| Classical Civilization (Minor) |  |  |
| Classics |  | 1504 |
| B.A. | 120 |  |
| Classics (Minor) |  |  |
| Cognitive Science (Minor) |  |  |
| Communication and Rhetorical Studies |  | 1506 |
| B.S. | 120 |  |
| Communication and Rhetorical Studies (Minor) |  |  |
| Communication Sciences and Disorders |  | 1220 |

## UNDERGRADUATE COURSE CATALOG

| B.S. | 120 |  | Electrical Engineering/Business Administration (Combined U/G) |  | $\begin{aligned} & 0909, \\ & 0506 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Communication Sciences and Disorders (Minor) |  |  |  |  |  |
| Communications Design |  | 1009 | B.S./M.B.A | 150 |  |
| B.F.A. | 121 |  | Energy and Its Impacts (Integrated Learning Major) |  | 1901.00 |
| Communications Photography (Minor) |  |  |  |  |  |
| Computer Art and Animation |  | 1009 | B.A. | 120 |  |
| B.F.A. | 129 |  | B.S. | 120 |  |
| Computer Engineering |  | 0999 | Energy Systems (Minor) |  |  |
| B.S. | 130 |  | Engineering \& Computer Science Management (Minor) |  |  |
| Computer Engineering (Combined UG) |  | 0999 |  |  |  |
| B.S./M.S. | 156 |  | English and Textual Studies |  | 1502 |
| Computer Engineering (Minor) |  |  | B.A. 120 <br> English and Textual Studies (Minor)  |  |  |
| Computer Engineering/Business Administration |  | 0999, |  |  | $\begin{aligned} & 1502, \\ & 1501 \end{aligned}$ |
| B.S./M.B.A. | 150 |  | English and Textual Studies (Tch Prep)/English Ed: Prep 7-12 (5 Yr) (Combined U/G) |  |  |
| Computer Gaming (Minor) |  |  | B.A./M.S. | 150 |  |
| Computer Science |  | 0701 | English Education 7-12 |  | 1501.01 |
| B.S. | 123 |  | B.A. | 123 |  |
| Computer Science (Combined UG) |  | 0999 | English Language Institute (0ther) |  |  |
| B.S./M.S. | 147 |  | Entrepreneurship \& Emerging Enterprises (Minor) |  |  |
| Computer Science (Minor) |  |  | Entrepreneurship \& Emerging Enterprises |  | 0506 |
| Computer Science/Business Administration |  | 0701, | B.S. | 122 |  |
| (Combined U/G) |  | 0506 | Environment and Society (Minor) |  |  |
| B.S./M.B.A. | 150 |  | Environment and Interior Design |  | 0203.00 |
| Computer Science/Computer Science (Combined U/G) |  | 0701, | B.F.A. | 120 |  |
|  |  | 0701 | Environmental Engineering |  | 0922 |
| B.S./M.S. | 150 |  | B.S. | 127-128 |  |
| Construction Management - ESF (Minor) |  |  | Environmental Engineering/Business Administration (Combined U/G) |  | 0922, |
| Creative Leadership |  | 0506 |  |  | 0506 |
| B.P.S. | 120 |  | B.S./M.B.A. | 150 |  |
| Certificate | 15 | 5004 | Ethics (Integrated Learning Major) |  | 1599.10 |
| Disability Studies (Minor) |  |  | European Literature |  | 1101 |
| Drama |  | 1007 | B.A. | 120 |  |
| B.S. | 120 |  | Exercise Science (Minor) |  |  |
| Drama (Minor) |  |  | Exercise Science (Dance) (Minor) |  |  |
| Earth Sciences |  | 1917 | Fashion Design |  | 1009 |
| B.A. | 120 |  | B.F.A. | 121 |  |
| B.S. | 120 |  | Film |  | 1010 |
| Earth Sciences (Minor) |  |  | B.F.A. | 129 |  |
| Earth Sciences (Tchr Prep)/Science Ed (Earth |  |  | Finance |  | 0504 |
| Sci): Prep 7-12 ( 5 Yr ) (Combined U/G) |  | $1917$ | B.S. | 122 |  |
| B.A./M.S. | 150 |  | Finance (Minor) |  |  |
| B.S./M.S. | 150 |  | Fine Arts |  | 1001 |
| Economics |  | 2204 | B.A. | 120 |  |
| B.A. | 120 |  | Fine Arts (Minor) |  |  |
| B.S. | 120 |  | Food Studies |  | 2299 |
| Economics (Minor) |  |  | B.S. | 120 |  |
| Economics (Tchr Prep)/Social Studies Ed: Prep |  |  | Food Studies (Minor) |  |  |
| 7-12 (5 Yr) (Combined U/G) |  | $2201$ | Forensic Science (Minor) |  |  |
| B.A./M.S. | 150 |  | Forensic Science (Integrated Learning Major) |  | 199.20 |
| B.S./M.S. | 150 |  | French and Francophone Studies |  | 1102 |
| Education Studies (Minor) |  |  | B.A. | 120 |  |
| Electrical Engineering |  | 0909 | French and Francophone Studies (Minor) |  |  |
| B.S. | 132 |  | General Accounting |  | 0502 |
| Electrical Engineering (Combined U/G) |  | 0909 | B.S. | 122 |  |
| B.S./M.S. | 156 |  | General Studies in Management |  | 0506 |
|  |  |  | B.S. | 122 |  |
| Electrical Engineering (Minor) |  |  | Geography |  | 2206 |

## UNDERGRADUATE COURSE CATALOG

| B.A. | 120 |  |
| :---: | :---: | :---: |
| Geography (Minor) |  |  |
| Geography (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G) |  | $\begin{array}{\|l\|} \hline 2206, \\ 2206 \\ \hline \end{array}$ |
| B.A./M.S. | 150 |  |
| German (Minor) |  |  |
| German Language, Literature, and Culture |  | 1103 |
| B.A. | 120 |  |
| Global Enterprise Technology (Minor) |  |  |
| Global Political Economy (Minor) |  |  |
| Global Security Studies (Minor) |  |  |
| Graphic Design |  | 1009 |
| B.S. | 122 |  |
| Health and Exercise Science |  | 1299.3 |
| B.S. | 125 |  |
| Health and Physical Education |  | 0835 |
| Health and Wellness (Minor) |  |  |
| History |  | 2205 |
| B.A. | 120 |  |
| History (Minor) |  |  |
| History (Tch Prep)/Social Studies Ed: Prep 7-12 (5 Yr) (Combined U/G) |  | $\begin{aligned} & 2205, \\ & 2201 \\ & \hline \end{aligned}$ |
| B.A./M.S. | 150 |  |
| History of Architecture |  | 1003 |
| B.A. | 120 |  |
| History of Architecture (Minor) |  |  |
| History of Art |  | 1003 |
| B.F.A. | 126 |  |
| iLEARN: The Center for Innovative Learning (Other) |  |  |
| Illustration |  | 1009 |
| B.F.A. | 126 |  |
| Inclusive Early Childhood Special Education Teacher Preparation |  | 0808 |
| B.S. | 134 |  |
| Inclusive Elementary and Special Education Teacher Preparation |  | 0808 |
| B.S. | 132 |  |
| Industrial and Interaction Design |  | 1009 |
| B.I.D. | 150 |  |
| Information Management and Technology |  | 0702 |
| B.S. | 120 |  |
| Information Mgmt \& Technology (Minor) |  |  |
| Information Technology, Design \& Startups (Minor) |  |  |
| Interdisciplinary Minor in Gerontology (Minor) |  |  |
| International Business (Minor) |  |  |
| International Relations |  | 2210 |
| B.A. | 120 |  |
| International Relations (Tch Prep-5 yr.)/Social Studies Ed: Prep 7-12 (5 yr.) (Combined U/G) |  | $\begin{array}{\|l} \hline 2210, \\ 2201 \\ \hline \end{array}$ |
| B.A./M.S. | 150 |  |
| Iroquois Linguistics for Language Learners (Certificate) |  | 1505.00 |
| Italian (Minor) |  |  |
| Italian Language, Literature, and Culture |  | 1104 |
| B.A. | 120 |  |
| Jazz Studies (Minor) |  |  |
| Jewelry \& Metalsmithing (Minor) |  |  |


| Jewelry and Metalsmithing |  | 1009 |
| :---: | :---: | :---: |
| B.F.A. | 126 |  |
| Jewish Education (Minor) |  |  |
| Jewish Studies (Minor) |  |  |
| Knowledge Management |  |  |
| B.P.S. | 120 |  |
| Certificate | 15 | 0799 |
| Landscape Architecture - ESF (Minor) |  |  |
| Latin American Studies (Minor) |  |  |
| Latino-Latin American Studies |  | 0308 |
| B.A. | 120 |  |
| Latino-Latin American Studies (Tch Prep)/Social <br> Studies Ed: Prep 7-12 (5 Yr) (Combined U/G) |  | $\begin{aligned} & 0308, \\ & 2201 \end{aligned}$ |
| B.A./M.S. | 150 |  |
| Leadership/Stewardship Communication (Minor) |  |  |
| LesbianGayBsxlTransgndr Stdies (Minor) |  |  |
| Liberal Arts |  | 5649 |
| A.A. | 60 |  |
| Liberal Studies |  | 4901 |
| B.A. | 120 |  |
| Linguistic Studies |  | 1505 |
| B.A. | 120 |  |
| Linguistic Studies (Minor) |  |  |
| Logic (Minor) |  |  |
| Magazine |  | 0602 |
| B.S. | 122 |  |
| Management |  | 0506 |
| B.S. | 122 |  |
| Management Studies (Minor) |  |  |
| Marketing (Minor) |  |  |
| Marketing Management |  | 0509 |
| B.S. | 122 |  |
| Mary Ann Shaw Center for Public \& Community Services (Other) |  |  |
|  |  | 1701 |
| B.A. | 120 |  |
| B.S. | 120 |  |
| Mathematics (Minor) |  |  |
| Mathematics (Tch Prep)/Mathematics Ed: Prep 7-12 (5 Yr) (Combined U/G) |  | $\begin{aligned} & \text { 1701, } \\ & 1701 \end{aligned}$ |
| B.A./M.S. | 150 |  |
| B.S./M.S. | 150 |  |
| Mathematics Education 7-12 |  | 1701.01 |
| B.A. | 124 |  |
| B.S. | 123 |  |
| Mechanical Engineering | 128 |  |
| Mechanical Engineering/Business Administration (Combined U/G) |  | $\begin{aligned} & 0910, \\ & 0506 \end{aligned}$ |
| B.S./M.B.A. | 150 |  |
| Medical Anthropology (Minor) |  |  |
| Medicolegal Death Investigation (Certificate) |  | 1999 |
| Medieval \& Renaissance Studies (Minor) |  |  |
| Middle Eastern Studies |  | 0309 |
| B.A. | 120 |  |
| Middle Eastern Studies (Minor) |  |  |
| Mindfulness \& Contemplative Studies (Minor) |  |  |
| Modern Foreign Language |  | 1101 |
| B.A. | 120 |  |

## UNDERGRADUATE COURSE CATALOG

| Modern Jewish Studies |  | 0399.00 |
| :---: | :---: | :---: |
| Music |  | 1005 |
| B.A. | 126 |  |
| Music Composition |  | 1004.10 |
| B. Mus. | 128 |  |
| Music Education |  | 0832 |
| B. Mus. | 132 |  |
| Music History and Cultures |  | 1006 |
| B.A. | 120 |  |
| Music History and Cultures (Minor) |  |  |
| Music Industry |  | 1004 |
| B. Mus. | 120 |  |
| Music Industry (Minor) |  |  |
| Music Performance (Minor) |  |  |
| Musical Theater |  | 1007 |
| B.F.A. | 128 |  |
| Nat Resources \& Envir Plcy - ESF (Minor) |  |  |
| Native American Studies (Minor) |  |  |
| Neuroscience (Integrated Learning Major) |  | 0425.00 |
| Newspaper and Online Journalism |  | 0602 |
| B.S. | 122 |  |
| Nutrition |  | 1306 |
| B.S. | 124 |  |
| Nutrition (Minor) |  |  |
| Nutrition Science |  | 1306 |
| B.S. | 124 |  |
| Nutrition Science (Minor) |  |  |
| Organ |  | 1004 |
| B. Mus. | 126 |  |
| Painting |  | 1002 |
| B.F.A. | 126 |  |
| Painting (Minor) |  |  |
| Paper Science - ESF (Minor) |  |  |
| Percussion |  | 1004 |
| B. Mus. | 126 |  |
| Philosophy |  | 1509 |
| B.A. | 120 |  |
| Philosophy (Minor) |  |  |
| Photography |  | 1011 |
| B.S. | 122 |  |
| Physical Computing (Minor) |  |  |
| Physical Education |  | 0835 |
| B.S. | 120 |  |
| Physical Education (Coaching) (Minor) |  |  |
| Physics |  | 1902 |
| B.A. | 120 |  |
| B.S. | 120 |  |
| Physics (Minor) |  |  |
| Physics (Tchr Prep)/Science Ed (Physics): Prep 7-12 (5 Yr) (Combined U/G) |  | 1902 |
| B.A./M.S. | 150 |  |
| B.S./M.S. | 150 |  |
| Piano |  | 1004 |
| B. Mus. | 126 |  |
| Policy Studies |  | 2102 |
| B.A. | 120 |  |
| Policy Studies (Minor) |  |  |


| Policy Studies (Tch Prep)/Social Studies Ed: <br> Prep 7-12 (5 Yr) (Combined U/G) |  | 2102, <br> 2201 |
| :--- | :--- | :--- |
| B.A./M.S. | 150 |  |
| Political Philosophy | 120 | 1509 |
| B.A. |  | 2207 |
| Political Science | 120 |  |
| B.A. |  |  |
| Political Science (Minor) | 150 | 2207, |
| Political Science (Tch Prep)/Social Studies Ed: <br> Prep 7-12 (5 Yr) (Combined U/G) |  |  |
| B.A./M.S. | 126 | 1009 |
| Printmaking |  |  |
| B.F.A. | 123 |  |
| Private Music Study (Minor) | 123 |  |
| Psychology | 120 |  |
| B.A. | 120 |  |
| B.S. | 120 |  |
| Psychology (Minor) |  |  |
| Public Communications Studies (Minor) |  |  |
| Public Health | 122 |  |
| B.S. | 123 |  |
| Public Health (Minor) |  |  |
| Public Relations | 120 |  |
| B.S. | 122 |  |
| Real Estate | 120 |  |
| B.S. | 122 |  |
| Real Estate (Minor) |  |  |
| Recording and Allied Entertainment Industries |  |  |
| B.S. | 125 | 0506 |
| Recreation Resource and Protected Area Man- |  |  |
| agement - ESF (Minor) |  |  |


| Science Education (Physics) 7-12 |  | 1902.01 |
| :---: | :---: | :---: |
| B.A | 123 |  |
| B.S. | 123 |  |
| Sculpture |  | 1002 |
| B.F.A. | 126 |  |
| Sculpture (Minor) |  |  |
| Selected Studies |  | 4901 |
| B.S. | 120 |  |
| Selected Studies in Arts and Sciences |  | 4901 |
| B.A. | 120 |  |
| Selected Studies in Education |  | 0899 |
| B.S. | 120 |  |
| Social Studies Education 7-12 |  | 2201.01 |
| B.A. | 126 |  |
| Social Welfare (Minor) |  |  |
| Social Work |  | 2104 |
| B.S. | 120 |  |
| Sociology |  | 2208 |
| B.A. | 120 |  |
| Sociology (Minor) |  |  |
| Sociology Secondary (Tch Prep-5yr) |  | 2208 |
| B.A./M.S. | 150 |  |
| Sound Recording Technology |  | 1099.00 |
| B.Mus. | 129 |  |
| South Asian Studies (Minor) |  |  |
| Spanish Education (dual) |  | 1105.00 |
| B.A. | 124 |  |
| Spanish Language, Literature and Culture |  | 1105.00 |
| B.A. | 120 |  |
| Spanish (Minor) |  |  |
| Special Studies in Art |  | 1001.00 |
| B.F.A. | 126 |  |
| Sport Management |  | 0599 |
| B.S. | 124 |  |
| Sport Management (Minor) |  |  |
| Stage Management |  | 1007 |
| B.F.A. | 124 |  |
| Strategic Management (Minor) |  |  |
| Strings |  | 1004 |
| B. Mus. | 126 |  |
| B.A. | 123 |  |
| B.S. | 123 |  |
| Supply Chain Management |  | 0506.00 |
| B.S. | 122 |  |
| Sustainable Construction Management (Minor) |  |  |
| Systems and Information Science |  | 0702.00 |
| B.S. | 120 |  |
| Television, Radio and Film |  | 0603.00 |
| B.S. | 122 |  |
| Theater Design and Technology |  | 1007.00 |
| B.F.A. | 130 |  |
| Visual Culture (Minor) |  |  |
| Voice |  | 1004.00 |
| B.Mus. | 126 |  |
| Wind Instruments |  | 1004.00 |
| B.Mus. | 126 |  |
| Women's and Gender Studies |  | 4903.00 |


| B.A. | 120 |  |
| :--- | :--- | :--- |
| Women's and Gender Studies (Minor) |  |  |
| Women's and Gender Studies (Tch Prep)/Social <br> Studies Ed: Prep 7-12 (5 Yr) (Combined U/G) |  | 4903, <br> 2201 |
| B.A./M.S. | 150 |  |
| Writing (Minor) |  |  |
| Writing and Rhetoric |  | 1507 |
| B.A. | 120 |  |

## Minors at Syracuse University

A minor provides an excellent opportunity to blend another subject area into your degree program without the additional requirements of a double major or dual degree. A minor may be related to your major, or it might be in a completely different academic/professional area. Because a completed minor appears on your transcript, it highlights another dimension of educational background to support an application for graduate study or employment.
A minor is a grouping of 6 or more courses, totaling 18 to 21 credits, of which 12 credits must be in 300- to 400-level courses. A minor may be similar to and named for an existing major, such as Chemistry, or it may be an interdisciplinary grouping, like Judaic Studies. The department or college offering the minor determines which courses are required. Some colleges require a formal minor as part of the degree program.
Minor courses may or may not fit into the electives of your degree requirements. Your academic advisor or home college undergraduate office can advise you on the effect of a minor on your particular degree program, including whether or not you will need to complete more than the normal total number of credits.

## Enrolling in a Minor

Pursuing a minor should be discussed with your academic advisor as early in your academic career as possible. You will then complete a Declaration of Minor form, available in your school/college undergraduate office. The form must be signed by the department or college offering the minor and, in some cases, your advisor. Your home college's undergraduate office will review the paperwork and enter the minor on your student record. A variety of minors offered by SUNY College of Environmental Science and Forestry are also available to Syracuse University students. Information about these minors may be found in Academic Offerings under SUNY-ESF. Students may request admission into SUNY ESF minors using the same forms and procedures used for Syracuse University minors. Information about minors that have enrollment limits or eligibility requirements can be obtained at the sponsoring department/college. The sponsoring unit can explain specific course requirements and options for the minor. In some cases, a minor must be officially listed on your record for you to be able to register for certain restricted courses. The department or college offering the minor determines the requirements, and any exception to the minor requirements must be granted by petition through the sponsoring department/college. After certification by your college for graduation, and if all coursework for the minor is completed, it will appear on your transcript under the college, major, and degree listing as "MINOR IN \{title\}."

## Pursuing More Than One Minor

You may pursue more than one minor if there are enough elective course opportunities in your degree program or if you choose to graduate with additional credits. This possibility should be discussed with your academic advisor or school/college undergraduate office.

## Official Minors

All current official disciplinary minors are listed on the appropriate school, department, or program pages. Detailed descriptions of requirements for each minor may be found in Academic Offerings. Interdisciplinary minors within the College of Arts and Sciences and between the College of Arts and Sciences and other schools and colleges may be found in Academic Offerings. Please be aware that not all minors are endorsed by all schools and colleges. You should verify that the minor you wish to pursue is accepted by your home college.

## Other Programs

## English Language Institute

Geraldine de Berly, Director
700 University Avenue, 315-443-8571
FAX: 315-443-1530
elimail@uc.syr.edu
http://eli.syr.edu/
The English Language Institute (ELI) offers English language instruction to international students and visiting professionals. It is administered through University College and offers instruction, from beginner to advanced levels.

The ELI provides intensive study of the language for those who must improve their English for academic or professional reasons. Its goal is to prepare participants to use English as quickly and effectively as possible. Instruction is offered in English grammar, reading, writing, listening, speaking, and pronunciation. Films, lectures, area trips, and special events are part of the program and are designed to help students learn English on an accelerated basis.

Students may take a series of 15 -week courses with 20 hrs a week of instruction. During the summer, two 6-week sessions with 25 hours a week of instruction are offered. The Legal English
course for those preparing to enroll in an LLM is available in summer. Short and long-term courses can also be designed for individuals or groups with specific needs and disciplines (e.g, architecture, business, engineering).

Completion of the Level 4 (high intermediate) course will waive the University TOEFL requirement for most undergraduate programs and some graduate programs.

For further information, contact the English Language Institute, 700 University Avenue, Syracuse NY 13244-2530, U.S.A.

## ILEARN

Kandice L. Salomone, Director 323 Hall of Languages, 315-443-1643 ilearn.syr.edu
The Center for Innovative Learning (iLEARN) of the College of Arts and Sciences supports a variety of innovative educational programs and undergraduate research activities in the College and its departments. It also serves as a clearinghouse for information about undergraduate research and other innovative learning opportunities, as well as a source of encouragement and support for their further development.

The center helps students complement traditional classroom and laboratory work with enhanced out-of-classroom learning experiences. These experiences represent active learning at its best, tapping students' creativity, curiosity, and drive. These kinds of opportunities also enable students to apply their knowledge and skill to independent research and other scholarly projects that engage students with current issues, and give them the kinds of experiences helpful in making career choices. Students may choose to earn academic or experience credit.

## Exemplary programs:

- Undergraduate Research Program
- The Syracuse University Undergraduate Mock Trial Program
- Ruth Meyer Undergraduate Research Scholars Program


## Funding opportunities:

iLEARN has funds available for use by arts and sciences undergraduate students, faculty, and departments/programs for eligible projects. Eligibility is dependent on a project's relevance to the types of educational activities listed in the mission statement. Inquiries should be made to the director of iLEARN.

Mary Ann Shaw

# Center For Public \& Community Service 

Pamela Kirwin Heintz, Director 237 Schine Student Center, 315-443-3051<br>http://shawcenter.syr.edu

The Mary Ann Shaw Center for Public and Community Service (SHAW CENTER) provides support for faculty to integrate community based service learning/research into academic coursework for undergraduate and graduate students. It does this by: furnishing organizational information about placements in nonprofit and/or public organizations for those seeking community based service learning/research opportunities; helping create new partnerships/collaborations and learning/research opportunities; and supporting ongoing academic programs/projects/ courses that foster community based service learning/research on the local, national, and global levels. Since opening in 1994, the SHAW CENTER has provided assistance to faculty in the form of consultation and orientation; identification and mitigation of risk/liability issues; and ongoing support, monitoring, and evaluation. Additionally, the SHAW CENTER offers a variety of curricular and co-curricular service opportunities at nonprofit and/or public organizations. Every college within the University offers community based service learning/research opportunities for students.

## The Program

Community based service learning components of courses provide opportunities for students to put the value of learning into action through community service placements. The students can connect theory and practice as they train for life, enrich their moral character, and develop their sense of civic responsibility. This educational opportunity deepens the students' sense of connectedness and responsibility to others and includes elements of vocation and avocation.

Students participate in the community based service components of their courses by completing a predetermined number of service hours at a community site. Under the direction of the course professor, teaching assistants, academic managers, and SHAW CENTER professional staff, students keep journals, write papers, do action based research, and present projects and reports to reflect on and process their community service experiences. The course professor assumes grading responsibility. Academic credit for the service learning experience is awarded by the professor through credit for the course.

The SHAW CENTER works with students, faculty, teaching assistants, academic administrators,
and community site partners and supervisors to assist in successfully implementing community based learning opportunities. The SHAW CENTER provides information about placement options; orientation to the community; assistance when there are questions; transportation (on a firstcome, first-served basis to the extent resources allow); and evaluation of the community service component of the course for future improvement.

## Courses

Students are invited to visit the SHAW CENTER office or web site at http://shawcenter.syr.edu/ to learn more about course options. Students are encouraged to discuss course options that interest them with the appropriate faculty advisor before registering. Students can, with the approval of the professor, request individual placements within courses to enhance assignments or course goals. The SHAW CENTER will work to help the student develop and implement an appropriate placement, as well as assist with the reflection and processing of the experience, if appropriate.

## Renee Crown <br> University Honors Program

Professor Stephen Kuusisto, Director
306 Bowne Hall, 315-443-2759
The Renée Crown University Honors Program is a selective, demanding, and rewarding program for outstanding students who seek intense intellectual challenge and are prepared to invest the extra effort it takes to meet that challenge. It is marked by four distinguishing characteristics:

- heightened expectations;
- participation in a vibrant and active community of learners;
- intensity of intellectual experience; and
- special intellectual opportunities and responsibilities.

The program is open to qualified students from all undergraduate majors at Syracuse University. Its requirements, supplemental to those of their majors, stipulate that they demonstrate the attributes of depth, breadth, command of language, global awareness, civic engagement, and collaborative capacity by successfully completing the following program requirements:

## DEPTH

1. An Honors Capstone Project, with written summary for a non-expert audience; and
2. XXX 499, Capstone Project preparation, in the major (e.g., HST 499 or ETS 499).

## BREADTH (the following three requirements):

1. An introductory honors seminar (HNR 100 for first-year students; HNR 210, HNR 220, or HNR 230 for students entering after their first year).
2. Disciplinary Diversity

Four three-credit Honors courses, from at least two of the following divisions: humanities, social sciences, or natural sciences/ mathematics. At least two of these courses must carry the HNR prefix. The remaining two courses may have the HNR prefix, or be Honors sections of regular, departmental courses. Students may substitute three one-credit, 200-level Honors seminars, taken for a grade, for one of these courses.
3. Interdisciplinary Work (one of the following three options):

1. An approved, three-credit HNR or other course with substantial interdisciplinary content; or
2. An independent project experience, with prior approval from the Honors Program; or
3. A clearly interdisciplinary Capstone Project, with prior approval from the Honors Program and from the student's major department.

## COMMAND OF LANGUAGE (the

following four requirements):

1. The Capstone Project as described under "Depth" above;
2. A written summary of the Capstone Project, as noted under "Depth" above;
3. One course or experience with a substantial public presentation requirement; and
4. Either one course with a significant quantitative component or one course in creative expression.

## GLOBAL AWARENESS (two

 of the following ten options; at least one must be nonEurocentric in its focus):1. One course that has a non-US focus (other than language courses);
2. A Capstone Project that has a non-US focus;
3. Ability in a foreign language at a level of 201 or higher;
4. An internship or other work with a documented global perspective for at least 50 hours;
5. A semester or summer abroad in a Universityapproved foreign study program;
6. An Honors-approved, short-term program
that includes a foreign travel component (see examples at: http://suabroad.syr.edu/ programs/shorttermprograms/)
7. At least one semester of residence in a Learning Community with an international focus.
8. Participation in the University's Maxwell in Washington Undergraduate Semester residency program (IR/DC);
9. An approved, sustained, reciprocal mentoring partnership with international students for one semester under the aegis of the Slutzker Center for International Services; or
10. An alternative path approved in advance by the Honors Program.

If the requirements of a student's major create a serious impediment to completing this requirement as stated, the student may, with prior approval from the program director, satisfy the requirement by completing two global courses, at least one of which must be non-Eurocentric.

## CIVIC ENGAGEMENT:

Demonstrate civic engagement through sustained, documented involvement over a minimum of three semesters. The minimum requirement is 50 hours in total.

## COLLABORATIVE CAPACITY (one of three options):

Successfully complete an extended activity with a team of three to five collaborators that involves significant intellectual content appropriate to the Honors Program:

1. An approved course that involves substantial teamwork; or
2. An independent project experience (in an area such as drama or engineering), resulting in production of a deliverable artifact, such as a report, presentation, or performance (requires faculty approval before work begins and at the end of the project);
3. An off-campus project (which may be done through an internship, field experience, or other activity), resulting in a deliverable artifact, such as a report, presentation, or performance, and accompanied by a written description of the experience, signed by the faculty mentor.

All courses taken to fulfill the above requirements must be completed with a grade of $B$ or better. Honors students must complete the program with a grade point average at least at the cum laude level in their home schools or colleges (for School of Architecture students, 3.2; for Newhouse students, 3.5 ; for all other schools and colleges, 3.4).

Upon completion of these requirements, "Renée

Crown University Honors" is awarded on the diploma and listed under "Awards and Honors" on the transcript.

## Courses

For a listing of current and past Honors courses offered each semester, go to http://honors.syr. edu/my-honors/courses-seminars/.

## Reserve Officer Training Corps (ROTC)

## The Reserve Officer Training Corps program is

 offered by the Air Force through the Department of Aerospace Studies and by the Army through the Department of Military Sciences. Both programs include a basic course taken during the freshmen and sophomore years, and an advanced course taken during the junior and senior years. Each program offers commissions in their respective service for men and women who complete the course requirements and meet other mandatory prerequisites.Students may enroll in the first two years of either program and complete field training or basic camp without incurring any military-service obligation. Uniforms and ROTC textbooks are furnished throughout the programs. Students accepted to the second two years of the programs are given a subsistence allowance of $\$ 450$ to $\$ 500$ a month during each academic year. Two-, three-, and four-year scholarship recipients receive tuition assistance, a book allowance, lab fees, and a stipend ranging from $\$ 300$ a month for firstyear students to $\$ 500$ a month for seniors for the duration of their scholarship.
Sophomores may receive credit for the basic course by attending a special, expenses-paid, five-week camp during the summer before the junior year.
Enrollment in the ROTC program is also available to seniors who expect to go directly into graduate school in a program that requires at least two academic years to complete, as well as to graduate students who will have four or more semesters remaining at the time of the next fall registration.
Academic credit awarded toward graduation requirements for military science and aerospace studies courses is determined by the individual schools and colleges.
Interested students should inquire at the ROTC office of their choice either before or at the start of the academic year or semester. Students may visit the ROTC offices in Archbold North. For more information on the individual program descriptions, refer to the course catalog or call the Unit Admissions Officer, Army ROTC, 315-443-

8233; or Air Force ROTC, 315-443-2461; or visit us.

Air Force Reserve Officer Training Corps Lt. Col. Jonathan Landis
Professor of Aerospace Studies
303 Archbold, 315-443-2461
The goal of the Air Force Reserve Officer Training Corps is to commission second lieutenants in the U.S. Air Force. Students completing the Air Force ROTC training program will serve as Air Force officers on active duty for a minimum of four years after graduation. These students will have learned to exercise leadership, think critically and creatively, and communicate effectively. All cadets are required to complete the Air Force ROTC course sequence. The ROTC academic courses are cross-listed with other University departments and colleges, allowing academic credit toward degree requirements.
Students in the Air Force ROTC program enroll in an aerospace studies (ASC) course each semester. ASC 205/PAF 275 and ASC 206/PAF 276 are taken during the first year and ASC/ HST 295 and ASC/HST 296 are taken during the sophomore year. These courses comprise the general military course and meet one hour a week.
During the junior year, students enroll in ASC 305/0\&M 405 and ASC 306/0\&M 406. During the senior year, they enroll in ASC 405/PAF 475 and ASC 406/PAF 476. These courses comprise the professional officer course, and each meets for three hours a week.

All academic courses are taught by career Air Force officers who hold at least a bachelor's degree. These officers are on the University faculty and hold the academic title of professor or assistant professor for the duration of their assignment.
Besides attending academic classes, cadets attend a leadership laboratory each week. The leadership laboratory provides instruction in Air Force customs and courtesies, drill and ceremonies, expeditionary skills, and briefings on career opportunities. The instruction is conducted by the cadet corps with a progression of experiences designed to develop leadership potential.

During the summer between the sophomore and junior years, cadets attend field training at Maxwell Air Force Base in Alabama. This training is four weeks long. Field training provides each cadet with leadership training, group involvement, physical fitness training, and a chance to experience life in an active Air Force environment.
Juniors in Air Force ROTC are eligible to apply for positions as cadet training assistants or to participate in professional development training programs around the country. Cadet training assistants attend a field training camp and train
and evaluate cadet trainees and execute field training activities.

Army Reserve Officer Training Corps
Lt. Col. Michael Bianchi
Professor of Military Science
308 Archbold North, 315-443-2462
Students in the Army ROTC program receive instruction in general military science in preparation for commissions as second lieutenants in the U.S. Army, Army Reserve, or Army National Guard. Officer education emphasizes such areas as the duties and responsibilities of junior officers; the understanding of the fundamental concepts and principles of military art and science; the development of leadership and management potential; a basic understanding of associated professional knowledge; a strong sense of personal integrity, honor, and individual responsibility; and an appreciation of the requirements for national security.
All students participate in a two to four-hour leadership laboratory each week. This period of instruction is largely student-planned and directed and provides opportunities for realistic leadership experience. It emphasizes leadership, basic military skills, and professional knowledge subjects.
In addition to the leadership laboratory, basiccourse students (freshmen and sophomore students) receive instruction in physical conditioning, first aid, effective writing, and human behavior. The basic course does not obligate students to any military service and only requires two to three hours a week.
After successful completion of basic-course requirements, students can enroll in advanced ROTC, which requires five to eight hours a week.
In the junior year cadets prepare for advanced camp, which takes place at an active duty Army base, during the summer between the junior and senior year.
Students study military leadership and management, map reading, advanced physical conditioning, military ethics, professionalism, and law. These courses, if cross-listed with other academic courses, may be taken for academic credit.

Field training exercises are held once each semester. They introduce a wide range of military skills and stress practical application of classroom instruction. Skills in rappelling, land navigation, tactics, and marksmanship are taught at a variety of field sites in Central New York and Pennsylvania.

## Aerospace Studies Courses

General Military

ASC 101,102/201,202
ASC 205/PAF 275
ASC 206/PAF 276
ASC/HST 295
ASC/HST 296

## Professional Officer

ASC 301,302/401,402
ASC 305/0\&M 405
ASC 306/0\&M 406
ASC 405/PAF 475
ASC 406/PAF 476

## Military Science Courses

MSL 101,102/201,202
MSL 301/371,302/372/401,402
PED 200

## Student SUccess Initiative (SSUI)

The Student SUccess Initiative (SSUI) program is committed to the retention of students. In partnership with SU's schools and colleges, SSUI provides a comprehensive learning community experience that includes personal coaching, quiet study areas, tutorials, and social activities. To qualify for the SSUI program, students must show some indication that they are academically "at risk" and are dedicated to making a change in their approach to academic and personal development. For more information, contact the SSUI office at 315-443-1095 or ssui@syr.edu or visit the web site.

## SU Abroad

Syracuse University Abroad 106 Walnut Place
Margaret Himley, Associate Provost for International Education and Engagement 1-800-235-3472, suabroad@syr.edu, http:// suabroad.syr.edu

Did you know that nearly 48 percent of Syracuse University students study in another country with SU Abroad? Consistently ranked as one of the nation's highest quality programs, SU Abroad offers a variety of options and signature features:

- Year-long, semester, summer, and short-term programs;
- Language at any level (beginner to advanced);
- Immersive homestay experiences;
- Assured guidance from staff and faculty abroad; and
- Once-in-a-lifetime internships and Signature

Seminars.
SU Abroad maintains centers in Santiago, Chile; Hong Kong and Beijing, China; London, England; Strasbourg, France; Florence, Italy; Madrid, Spain, and Istanbul, Turkey.

Our World Partners programs provide opportunities in many additional locations, including Australia, the Czech Republic, Ecuador, Germany, India, Ireland, Israel, Japan, Korea, Russia, South Africa, Turkey, and more. Courses award SU credit, and your financial aid travels with you. Study abroad grants and other scholarships are available.

## Undergraduate Research

## Undergraduate Research Program

Kandice L. Salomone, Director 323 Hall of Languages, 315-443-1643 ilearn.syr.edu

The Undergraduate Research Program (URP), housed in the College of Arts and Sciences but open to qualified participants from other colleges, exists to provide non-classroom, credit-bearing educational opportunities to undergraduate students. Interested qualified students work closely with Arts and Sciences faculty members in faculty generated research projects, other projects representing the faculty member's academic interests, learning environments provided by professionals affiliated with the College of Arts and Sciences, or eligible off-campus internships. The program features the apprenticeship model, and students gain firsthand experience in creative and investigative academic processes, translate theory into practice, explore the cutting edges of particular disciplines, develop closer working relationships with faculty members, and enhance their own career and educational credentials.

## Faculty Participation

The program offers Arts and Sciences faculty members a chance to extend and expand the character of their teaching in the undergraduate context, to work closely with self-selecting, highly motivated students, to attract excellent students to continued study in their particular field of study, and to open both internal and external funding possibilities by way of undergraduate involvement in their work. Faculty members are invited to propose projects to the Director. Individual projects may extend beyond a semester in length as appropriate. The character and requirements of these projects, as well as the number of credits involved, vary greatly, since they come from across the disciplines of the College of Arts and

Sciences. The common criterion for all, however, is appropriateness to an educational credit-bearing experience for qualified undergraduate students.

## Defense

Comptrollership Program

## Contact

Irma P. Finocchiaro, Director, Executive/Defense Programs, 420 Whitman School of Management, 315-443-2898, ifinocch@syr.edu

## Program Description

The Defense Comptrollership Program (DCP) is a unique cooperative endeavor between the Department of Defense/ Department of Homeland Security and Syracuse University. Jointly established in 1952 by the Whitman School of Management and the Maxwell School of Citizenship and Public Affairs, DCP was designed to provide an academic foundation of both business and government theory. It is a dual degree M.B.A./Executive Master of Public Administration (Executive M.P.A.). As the practice of these concepts and theories will be utilized in the dynamic environment of national defense, emphasis is placed upon the implications for comptrollership. The DCP participants pursue the traditional M.B.A. and Executive M.P.A. curriculum along with the other graduate students during the fall and spring semesters. The transition to the practice of Defense Comptrollership is delivered to the DCP class during summer sessions. As part of the course, students are required to take the Certified Defense Financial Management Exam and spend a week in Washington D.C. Upon successful completion of the 14-month tailored curriculum, commissioned officers and professional civilian employees are awarded both an M.B.A. and an Executive M.P.A. degree and assigned to resource management positions throughout the Department of Defense.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Degree Requirements

This is a 60 credit dual degree that leads to a Master in Business Administration degree and an Executive masters in Public Administration degree.

## First Quarter-Summer <br> (12 credits)

MBC 601 - Economic Foundations of Business 1.5 credit(s)

- MBC 602 - Economics for International Business 1.5 credit(s)
- MBC 603 - Creating Customer Value 1.5 credit(s)
MBC 604 - Managing the Marketing Mix 1.5 credit(s)
- MBC 638 - Data Analysis and Decision Making 3 credit(s)
- PPA 730 - Dispute Resolution for Public Managers 3 credit(s)


## Second Quarter-Fall (15 credits)

- PAI 897 - Fundamentals of Policy Analysis 3 credit(s)
- MBC 606 - Information Technology for Decision Support 1.5 credit(s)
- MBC 607 - Understanding Financial

Statements 1.5 credit(s)

- MBC 608 - Creating Financial Statements 1.5 credit(s)
- MBC 610-Opportunity Recognition and Ideation 1.5 credit(s)
- SCM 656 - Project Management 3 credit(s)
- PAI 895 - Mid-career Training Group 1-3 credit(s) (3 credits required) or

PAI Elective Choice 3 credit(s)

## Third Quarter-Winter and Spring (18 credits)

- PAI 742 - Public Administration and Law 3 credit(s) or
- PAI Elective Choice 3 credit(s) (Winter)
- FIN 600 - Selected Topics 1-6 credit(s) Bank Management (1.5 credits required)
- MBC 609 - Accounting for Managerial Decisions 1.5 credit(s)
- MBC 616-Operations Management 1.5 credit(s)
- MBC 617 - Supply Chain Management 1.5 credit(s)
- MBC 618 - Competitive Strategy 1.5 credit(s)
- MBC 619 - Corporate Strategy 1.5 credit(s)
- MBC 627 - Financial Markets and Institutions 1.5 credit(s)
- MBC 628 - Fundamentals of Financial Management 1.5 credit(s)
- PAI 895 - Mid-career Training Group 1-3 credit(s) (3 credits required) or
- PAI Elective Choice 3 credit(s)


## Fourth Quarter-Summer (15 credits)

One week visit to Washington, DC

- ACC 760 - Principles of Fraud Examination 3 credit(s)
- BUA 600 - Selected Topics 1-6 credit(s) Seminar in Resource Management (3 credits required)
- BUA 786 - Sem/Army Comptrollership 3 credit(s)
- MBC 647 - Global Entrepreneurial Management 3 credit(s)
- PAI 996 - Master’s Project Paper 3 credit(s)


## Additional Information

* 24 hours of Community Service and passing the CDFM examinations are required


## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements.

## Guide to Reading Course Descriptions

## Course Numbering

## System

The present system of numbering courses prescribes that all courses use three digits to indicate the course level and/or type of course, and a three-letter subject to indicate the department or college.

The following catalog numbering guidelines indicate the level and type of course:
Remedial and noncredit courses
000-099
Freshman-level courses
100-199
Sophomore-level courses
Junior- and senior-level courses Joint undergraduate- and graduate-
level courses
First-year graduate-level courses Second- and third-year graduate-level courses
Readings, research, and individual study courses at the doctoral level only
Master's thesis

Individualized study program Doctoral dissertation

## Interpretation

- The first, or left, digit of the course catalog number indicates level.
- The second, or middle, digit may or may not indicate the study area, depending upon the curriculum structure of the particular department.


## Glossary of Course Subjects

Each course number is preceded by a three-letter subject that indicates the area of study. You can view a complete alphabetical list of subjects, together with the area for which each stands and the college or school in which the course is taught, by selecting the Courses link.

## Guide to Reading Descriptions

## Example 1

CHE 477 - Preparation and Analysis of Proteins and Nucleic Acids College of Arts \& Sciences Crosslisted with: BCM 477
Double Numbered with: CHE 677
3 Credits - Offered at least 1 time, fall or spring Experimental methods for biologically synthesizing and chemically purifying macromolecules in order to analyze their structure and function, including: polymerase chain reaction; site-directed mutagenesis; Protein expression and purification; nucleic acid and protein electrophoresis.
Additional work required of graduate students.
PREREQ: CHE 474 or BIO 326 or BIO 575
CHE 477 - course subject = CHE (Chemistry) (see "Courses") and catalog number $=477$.
Preparation and Analysis of Proteins and Nucleic Acids - course title.
College of Arts and Sciences - the school, college, or academic unit offering the course.

Crosslisted* with: BCM 477 - course is crosslisted with a course in Biochemistry, BCM 477.
*Crosslist: Two or more different subjects, same or different course numbers, but with the same title and catalog description, e.g., CHE/BCM
477. Crosslisting may occur within a school or college, or between schools/colleges.
Double Numbered** with: CHE 677 - Course is also offered as CHE 677. **Double Number:
Same subject, two different course numbers at the same or different levels, usually undergraduate and graduate, e.g., CHE
477/677.

3 Credits - number of academic credits the course carries. Variable credit courses show a range of credits, e.g. 1-3 credits.
Offered at least 1 x fall or spring - Indicates frequency of offering. Courses may be offered every semester, at least once a year, only in academic years ending in an odd year (20122013) or in an even year (2013-2014); during a summer session, irregularly, or based on sufficient student interest.
Experimental methods for biologically synthesizing and chemically purifying macromolecules in order to analyze their structure and function, including: polymerase chain reaction; site-directed mutagenesis; Protein expression and purification; nucleic acid and protein electrophoresis. Additional work required of graduate students. Course description
PREREQ: CHE 474 or BIO 326 or BIO 575 - A prerequisite (PREREQ) is a course or condition that must be successfully completed or met before enrollment is possible in the course described. A course may also have a corequisite (COREQ), which requires concurrent enrollment.

## Example 2 - Courses that can be repeated for credit

SED 340 - Participation in the Professional Development School of Education Double Numbered with: SED 640 0-1 Credits - Offered each semester Individual involvement in research, discussion and decision making with teachers, university faculty, and colleagues who are members of the Professional Development School Cadres and Academies. Repeatable 5 time(s), 2 credits maximum

In this example, "repeatable 5 time(s), 2 credits maximum" appears at the end of the description. This means the course may be taken and counted more than once toward fulfillment of degree requirements. In the example, SED 340 can be repeated up to 5 times, but only for a maximum of 2 credits earned.

## Descriptions of AllUniversity Courses

All-University courses allow students considerable flexibility in developing individual academic programs. Students enrolled in any school or college within the University may enroll in these courses. Some, but not all, all-University courses are displayed under individual school and college course listings in this catalog. Whether listed or not, the descriptions are standard in every program and are provided below.
Experience credit and independent study courses may be elected for one to six credits, depending on individual arrangements with the participating faculty member. In selected topics courses, students may earn one to six credits. Students are advised to check carefully with their faculty advisors and the dean of their school or college before registering for an all-University course to be sure that the course will be accepted toward the completion of their degree requirements.

[^2]EXPERIENCE CREDIT
(Subject) (Catalog Number) Experience Credit 1-6 credits
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. The student must get permission, in advance, of assigned instructor, department chair, or dean.

## - INTERNATIONAL COURSE

(Subject) (Catalog Number) (Title and Name of Institution) 1-12 credits
Offered through Syracuse University Abroad (SU Abroad) by an educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SU Abroad works with SU's academic department to assign the appropriate course level, title, and grade for the student's transcript.

## INDEPENDENT STUDY

(Subject) (Catalog Number) Independent Study 1-6 credits
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department. May be repeated for credit.
HONORS THESIS
(Subject) 499 Honors Thesis 3-6 credits The " 499 " number is used as needed by all departments in the University. Students sign up for Honors Thesis the same way they do for the other all-University courses - by filling out a form at registration each time they register for the course.

## Course Numbering for All-University Courses

|  | Lower-division | Upper-division | Joint undergraduate- and <br> graduate-level | $1^{\text {st }}$ year graduate | Advanced graduate |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Selected topics | 100,200 | 300,400 | 500 | 600 | 900 |
| Experience credit | 170,270 | 370,470 | 570 | 670 | 970 |
| International | 180,280 | 380,480 | 580 | 680 | 980 |
| Independent study | 190,290 | 390,490 | 590 | 690 | 990 |
| Honors thesis |  | 499 |  |  |  |

# School of Architecture 

Michael Speaks, Dean<br>201 Slocum Hall<br>soa.syr.edu

# About the College 

## Dean's Message

The Syracuse University School of Architecture consistently ranks among the best schools of architecture in the nation. The reasons most often cited are our committed and diverse faculty, our number and variety of study abroad opportunities, and our nationally-accredited, professional degree programs, which provide students the technical skill and the cultural knowledge necessary to practice in an increasingly competitive global marketplace.

Consistent with our commitment to prepare students for a world shaped by globalization, the Syracuse School of Architecture has created the Global Studio program with facilities and full time faculty in Florence, London and New York. Students may spend up to two semesters studying full time in each of these programs. In addition, we offer a range of other study abroad options with shorter programs of study in Turkey, Japan, China and India. We are also committed to bringing world-class practitioners and educators to teach and lecture at our home campus in Syracuse. Each semester we organize a visiting lecture series featuring architects and designers from around the world. And, each semester, as part of our Visiting Critic Program, nationally and internationally recognized professors lead studios on our Syracuse campus.

Shaped by globalization and rapid technological transformation, the practice of architecture, over the last decade, has undergone dramatic change, placing the architect, once again, at the center of some of the most defining issues of our time. The School of Architecture at Syracuse University has not only kept pace with these changes, but our faculty, staff, students and alumni have led and continue to lead the effort to make a better world through the design of better buildings and cities. We invite you to visit and to join us.

Michael Speaks, Ph.D.
Dean, School of Architecture

## Educational Mission

## Program Mission

As a professional-degree-granting college within a research university, the School of Architecture
at Syracuse University is dedicated to creating a rich academic environment marked by the confluence of advanced practice, contemporary theory, and social engagement. Our primary goal is to help students develop the capacity and judgment necessary to understand the built environment and generate architecture as a critical response, so that each student can engage both the discipline of architecture and the multiple discourses-artistic, technological, social, political, environmental, economic-necessary to be a successful practitioner and a conscientious citizen. Through our teaching and public programming, we help students gain a deep knowledge of architecture's techniques, traditions, methods of inquiry, and modes of production, so that they emerge with the intellectual breadth and acuity to meet the challenges of a rapidly changing world that demands agility and innovation. Through both programming and outreach activities, we aim to engage a wider public audience in a dialogue about the role of architecture in society.

To serve this mission we are committed to the following principal objectives:

- Recruiting, enrolling, and retaining the most qualified students.
- Recruiting, employing, and retaining the most qualified faculty and staff.
- Creating and sustaining a supportive academic environment marked by academic integrity, cultural diversity, and social responsibility.
- Providing the best professional education possible by offering professional degree programs that combine expertise specific to the discipline of architecture with critical thinking skills and intellectual knowledge central to humanistic study.
- Teaching an integrated curriculum within which courses in design and other specializations support the proposition, exploration, and development of architectural ideas.
- Maintaining and enhancing our expertise and capabilities in significant areas of research and practice.
- Providing opportunities for students to participate in international study programs to better understand the global forces and local cultural contexts that contribute to the production of architecture and urban design in these settings.
- Offering visiting critic studios both on and off campus that provide students with an exposure to alternative perspectives and advanced building practices.
- Demonstrating overall competency through a self-directed process of research, documentation, proposition, and project development within the capstone experience
of thesis.
- Increasing student awareness of and ability to engage with major issues such as social equity, economic development, and ecological balance.
- Encouraging faculty and students to participate in interdisciplinary initiatives offered within a diverse and rich campus setting.
- Preparing graduates to enter the profession in a variety of ways, with strong basic design skills coupled with the technical ability, business acumen and an understanding of the ethical role of the architect in society.
- Supporting faculty achievement in creative activity and scholarly research.
- Generating advocacy and support for School initiatives from alumni, faculty, staff, and advisory board members, and among civic and business leaders.


## Syracuse Architecture Studio Culture

The primary goals of the School of Architecture at Syracuse University are to promote research into architecture and to educate students for professional practice and other forms of architectural engagement. Faculty instructors challenge students to develop the capacity for understanding the built environment and generating architectural design proposals as a critical response. They assist students in cultivating manifold design capabilities linked to critical intelligence about the discipline and supported by state-of-the-field expertise in representation, technology, structures, theory and history.

A central component of this mission is the cultivation of a learning environment that supports students in the fullest development of their capacities as designers, scholars, professionals, and citizens. To this end, students, faculty and staff are dedicated to the task of working together to foster five fundamental values:

- mutual respect among all members of the School;
- optimism about the potential for student learning, creativity and contribution;
- collaboration among students, faculty, staff and the broader public in pursuing advances in learning, knowledge, and practice;
- critical engagement with the discipline, the profession and the world; and
- continual innovation in teaching, learning, and research.

These values inform all of our activities. In the context of classrooms, studios, and other learning environments, they translate into these guidelines:

- The School encourages students and faculty alike to embrace the design studio and the classroom as places of intellectual and creative exploration and collaboration. The frequently open-ended pursuit of knowledge through design and other forms of learning requires generosity of spirit on all parts, including the recognition that faculty members bring a high level of expertise to their teaching and that students bring a diversity of valuable prior knowledge to their learning. It also requires clear communication, rigorous testing of ideas, and a commitment to excellence on the part of all participants.
- The School encourages collaboration among students in their academic work and in extracurricular activities, as well as among students, faculty and staff in continually advancing knowledge and improving the ways we work together. It also promotes a culture of engagement in which students develop intellectually, technically and ethically through interaction with problems, opportunities and people not only within the field of architecture but also beyond it.
- The School values social, intellectual and disciplinary diversity in its staff, faculty and student population, as well as in its curriculum. In its teaching, research and daily activities, it strives to support and promote each of these kinds of diversity.
- The School recognizes that balance is a crucial element in the pursuit of excellence, and it encourages faculty to guide students in developing the capacity to reconcile what often seem to be competing imperatives in their work and in their lives. This includes managing expectations so as to minimize conflicts among courses, helping students to manage their time effectively, and promoting an appropriate balance between academic work and the other essentials of life.
- The School expects students to uphold the principles of academic integrity in their work and ethical conduct in their daily lives. Honesty, trustworthiness and fairness are essential attributes for conduct in class, within the university community, and in academic activities beyond Syracuse. These principles should guide behavior not only in the completion of course assignments, but also in treatment of buildings and equipment; interaction with university staff, systems and procedures; and behavior in the studio and elsewhere.


## Accreditation

The School of Architecture B.Arch and M.Arch programs are fully-accredited by the National Architectural Accreditation Board (NAAB).

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accreditation Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may require a pre-professional undergraduate degree in architecture for admission. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Syracuse University, School of Architecture offers the following undergraduate NAAB-accredited degree program:

## B.Arch - 162 Credit Hours

For further information about NAAB accreditation, visit the NAAB website.

## Undergraduate Education

Chair Theodore Brown, 201 Slocum Hall Contact School of Architecture, (315) 443-8242

The Syracuse University School of Architecture offers one of the most distinguished undergraduate programs in the nation leading to a professional bachelor of architecture degree. Founded in 1873, the school provides a comprehensive and intellectually challenging approach to the design of the built environment. It is a course of study that recognizes the mix of art and technology, and responds to the changing demands of the profession and society.
The design studio sequence is at the core of the five-year undergraduate program and is unique to architectural education. It is here that students begin to understand the fundamentals of design, working alongside their classmates. Instruction takes place at the desk through extensive one-onone communication with dedicated professors, and in formal and more casual reviews of work. In addition to studio and class work the school hosts a renowned lecture series, as well as symposia and exhibitions by leading architects, critics, and scholars, many of whom also participate in studio reviews held throughout the semester.
Our faculty members are recognized for their level of commitment to each student's progress and represent a broad range of the profession, from practicing architects, architectural historians, and theorists to professional artists and engineers.

Upper-level students have the option of study in New York City and abroad through programs in Florence, Italy; and London, England. They also have the opportunity to select a visiting critic studio led by notable architects from across the nation and abroad. These design studios explore advanced architectural issues, computer applications, and fabrication techniques.
Prospective students may apply to the school for fall admission. All applicants must submit a portfolio of creative work. We strongly recommend all applicants to visit the school and complete an interview and in-person portfolio review with a faculty member.

Students from other schools of architecture may apply for fall admission to the first or second years of the B.Arch. program. In most cases transfer students begin the studio sequence in the first year (ARC 107) unless advanced standing has been approved. Transfer credit evaluations are completed after a student is admitted into the B.Arch program.

Syracuse University students interested in intraUniversity transfer to the School of Architecture must have a minimum 3.0 grade point average, prepare and submit a portfolio of creative work, and participate in a personal interview. No midyear transfers are accepted.
Students not enrolled in the B.Arch. program may minor in Architecture. The minor in architecture is described in the Architecture Minor section of the School of Architecture course catalog. For information on the major or minor in the history of architecture, please see the College of Arts and Sciences.

For further information about our undergraduate program, please visit our website.

## Off Campus Programs

## The Programs

Syracuse Architecture offers opportunities for advanced-level architecture students to spend a semester or a summer studying in one of our off-campus centers - New York City, Florence, or London. Undergraduate students typically study away in the spring semester of their third year and/or the fall semester of their fourth year of the B.Arch program. Virtually $100 \%$ of students study away for a single semester, but opportunity exists to enroll for two consecutive semesters as well - $50 \%$ of our students choose to study away for a full year. Our programs are also open to non-SU students who study architecture and are currently enrolled in an accredited architecture program. Special scholarship opportunities exist to aid students in taking advantage of study away programs.

## Florence

As part of the Florence Architecture Program, established in 1980, students engage the traditional European city and gain an international perspective on design and theory. Annual symposia attract European architects and international critics who are in the forefront of the profession, and there are extensive field trips to sites of architectural significance such as Venice, Milan, Rome, Lucca, Bologna, and Pisa. The Florence Center includes five separate structures that house classrooms, lecture halls, a library, computer clusters, language center, and gardens. The recently renovated architectural studios are housed in 19th-century artist studios on Piazza Donatello, just a 15-minute walk from the historic center of Florence.

## London

The London program is based at the Syracuse University London Center in central London, near Covent Garden and the British Museum. The program is structured around a design studio and includes history courses and a field studies seminar exploring the historic and contemporary architecture of London, with excursions to other cities in the UK. Students may also select from the wide range of nonprofessional courses available to satisfy elective requirements. The program is staffed by London-based faculty and includes guest lecturers and visiting critics drawn from the extensive London architecture community.

## New York City

The University's new Fisher Center is based at 136 Madison Avenue in Midtown Manhattan. The New York City program offers opportunity to study in one of the most architecturally rich and culturally vibrant cities in the world. The curriculum focuses on the city's history, urban morphology, planning, real estate development, as well as urban theory. The program draws on Syracuse Architecture faculty and NYC-based critics, combined with guest lecturers, collateral programming, and extensive field studies in and around the city.

## Short-Term/Summer Global Programs

In addition to the regular semester offerings, summer and other 2-5 week study away opportunities, including summer studies abroad, are easy and attractive options that play an integral part of the undergraduate curriculum. Previous programs have taken students to India, France, Turkey, Greece, Germany, Russia, Spain, Austria, China, South America and Japan.

## Questions

For further information about our off-campus
programs and how to apply, contact the Syracuse Architecture Associate Dean's office at (315) 4433324 or visit our website.

## Facilities, Research, Institutes

## Slocum Hall

Slocum Hall, the School of Architecture's campus home, offers an ideal environment for teaching, research, production, and exhibition. Constructed in 1918 and listed on the National Register of Historical Places, the five-story building underwent a dramatic redesign from 2006-2008 to enhance and restore original qualities while updating it technologically, functionally, and aesthetically. Slocum Hall now includes a vast open central atrium space, an auditorium as well as expanded studio, research, and office space.

The building's openness provides a cohesive setting that generates activity and communication between students, faculty, and visitors, supported by interconnecting vertical spaces or atria within the building. The central atrium and additional openings in the bearing wall allow pathways for natural light and ventilation. Facilities are closely integrated with the school's pedagogical priorities. Public review spaces, an exhibition gallery, the architecture reading room, faculty offices, and the café are located along the perimeter of these atria in order to encourage collaboration and exchange.

## Computing and Fabrication

The School of Architecture has two computer clusters. Equipment includes 60 Dell PCs connected to their own network and servers. State of the art software is available for a wide range of applications: 2D and 3D drafting; modeling, visualization, rendering and animation; image manipulation; desktop publishing; web page generation; video production; and GIS mapping. An output room provides an assortment of plotters, printers, and scanners. Digital fabrication equipment includes multiple 3D printers, laser cutters, CNC mill and vacuum former. Required and elective courses range from introduction to the 3D computing environment to digital animation and digital production.

The fully equipped model shop is staffed by a full-time professional instructor and includes such woodworking equipment as saws, drills, planers, routers, sanders, a lathe, and various hand tools. There is also a ventilated spray booth for painting and finishing.

## Reading Room and Library

Bird Library, the University research library, has an excellent collection of more than 10,000
architecture titles. In addition, the Architecture Reading Room on the third floor of Slocum Hall serves the needs of the School of Architecture and its students for quick access to course reserves, current periodical titles, and reference works. The general stack collection of more than 2,500 titles includes such commonly used architecture books as history surveys, monographs on key figures in architecture, technical sources, and reference standards. The Architecture Reading Room also houses a significant collection of prints of architectural working drawings. It provides a quiet and convenient place to study between classes, and is supported by the Syracuse University library system.

## Major

## Architecture, B.Arch

School of Architecture
201 Slocum Hall
ph. (315)443-8242
e. ugarch@syr.edu

## Chair

Ted Brown, 201 Slocum

## Faculty

Bruce Abbey, Maya Alam, Amber Bartosh, JeanFrançois Bédard, Lori Brown, Theodore Brown, Lawrence Chua, Angela Co, Gregory Corso, Sekou Cooke, Julia Czerniak, Lawrence Davis, Benjamin Farnsworth, Joseph Godlewski, Terrance Goode, Susan Henderson, Roger Hubeli, Molly Hunker, Elizabeth Kamell, Randall Korman, Janette Kim, Elizabeth Krietemeyer, Julie Larsen, Mark Linder, Brian Lonsway, Sinéad Mac Namara, Arthur McDonald, Kyle Miller, Anne Munly, Daekwon Park, Tarek Rakha, Richard Rosa, Josean Ruiz Esquiroz, Francisco Sanin, David Shanks, Yutaka Sho, Edward Sichta, Michael Speaks, Timothy Stenson, Robert Svetz, Fei Wang

## Program Description

The B.Arch is a 5 -year professional degree in Architecture. Students in the B. Arch program take courses in architectural design, theory, technology, history and professional practice. Graduates of this program are prepared to enter into the Intern Development Program (IDP) required to become a licensed architect.

## Degree Awarded

This is a 162 credit major leading to a Bachelor of Architecture (B.Arch) degree.

## UNDERGRADUATE COURSE CATALOG

## Prerequisites for Admission into the B.Arch Program

All applicants to the B.Arch program must submit a portfolio to the School of Architecture for review.

## B.Arch Degree Requirements

Architecture Design-54 credit hours

- ARC 107 - Architectural Design I
- ARC 108 - Architectural Design II
- ARC 207 - Architectural Design III
- ARC 208 - Architectural Design IV
- ARC 307 - Architectural Design V
- ARC 407 - Architectural Design VI
- ARC 408 - Architectural Design VII
- ARC 409 - Architectural Design VIII
- ARC 508 - Architectural Design IX-Thesis

Architecture History- 12 credit hours

- ARC 133 - Introduction to the History of Architecture I
- ARC 134 - Introduction to the History of Architecture II

Architecture History Elective- Choose 6 credits from the following:

- ARC 331 - Art and Architecture of India
- ARC 332 - Sixteenth Century Italian Architecture
- ARC 334 - The Architecture of Revolutions
- ARC 335 - Early Renaissance Architecture in Italy 1400-1529
- ARC 336 - Italian Seventeenth Century Architecture

ARC 337 - American Architecture, Settlement to 1860

ARC 338 - American Architecture, 1860 - World War I

- ARC 431 - Early Modern Architecture
- ARC 432 - The City in Architectural History
- ARC 433 - French Architecture, Sixteenth and Seventeenth Centuries

ARC 435 - Islamic Architecture

- ARC 436 - Modern Architecture: The International Style to Present

Architecture Theory- 6 credit hours

- ARC 141 - Introduction to Architecture
- ARC 242 - Architectural Theory

Technologies- 12 credit hours

- ARC 121 - Introduction to Building and Structural Systems
- ARC 222 - Building Systems Design I
- ARC 322 - Building Systems Design II
- ARC 423 - Advanced Building Systems


## Structures- 6 credit hours

- ARC 211 - Structures I
- ARC 311 - Structures II

Professional Requirements- 12 credit hours

- ARC 181 - Representation I
- ARC 182 - Representation II
- ARC 505 - Thesis Preparation
- ARC 585 - Professional Practice


## Professional Electives- 18 credit

 hours from the following:- ARC 500 - Selected Topics in Architecture
- ARC 535-Organicism in Modern Architecture
- ARC 536 - Italian Urbanism: 100 Cities
- ARC 537 - Italian Medieval Architecture and Urbanism
- ARC 538 - Artistic Patronage of Medici
- ARC 539 - Italian Architecture, 1909-1959
- ARC 551 - Le Corbusier 1887-1965
- ARC 552 - Politics of Public Space
- ARC 554 - Material Manifestations
- ARC 556 - Rem Koolhaas: Architect, Historian, Provocateur, Document Maker
- ARC 557 - Utopia:Design and Cultural Imagination
- ARC 561 - Survey of British Architecture
- ARC 562 - Cities and the Culture of Urban Housing Morphologies
- ARC 563 - Introduction to Computer Applications in Architecture
- ARC 564 - Drawing
- ARC 565 - Visual Design
- ARC 566 - Introduction to Preservation
- ARC 568 - Real Estate Design and Development
- ARC 571 - Survey of Italian Architecture
- ARC 572 - Advanced Computer Applications to Architecture
- ARC 573 - Utopia and Transformation in Early American Town Planning
- ARC 574 - Reading the Landscape
- ARC 575 - Urban Housing - Building, Block, Street
- ARC 576 - Theories \& Analysis of Exurbia
- ARC 577 - Visual Studies
- ARC 578 - Facade as Idea


## Arts and Sciences Requirements9 credit hours

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing


## Structures Prep- Choose one of the following:

- MAT 221 - Elementary Probability and Statistics I
- MAT 285 - Life Sciences Calculus I
- MAT 295 - Calculus I
- PHY 101 - Major Concepts of Physics I

Arts and Science Electives- 21 credit hours

Open Electives- 12 credit hours

## Total: 162 credit hours

## B.Arch Curriculum

First Year, Fall Semester

- ARC 107 - Architectural Design I
- ARC 141 - Introduction to Architecture
- ARC 181 - Representation I
- WRT 105 - Studio 1: Practices of Academic Writing

Total Credits: 15
First Year, Spring Semester

- ARC 108 - Architectural Design II
- ARC 133 - Introduction to the History of Architecture I
- ARC 121 - Introduction to Building and Structural Systems
- ARC 182 - Representation II
- Structures Prep (3 credits)

Total Credits: 18
Second Year, Fall Semester

- ARC 207 - Architectural Design III
- ARC 134 - Introduction to the History of Architecture II
- ARC 222 - Building Systems Design I
- Arts and Science Electives (6 credits)

Total Credits: 18

## Second Year, Spring Semester

- ARC 208 - Architectural Design IV
- ARC 242 - Architectural Theory
- ARC 211 - Structures I
- Arts and Science Elective (3 credits)
- WRT 205 - Studio 2: Critical Research and Writing

Total Credits: 18
Third Year, Fall Semester

- ARC 307 - Architectural Design V
- ARC 322 - Building Systems Design II
- ARC 311 - Structures II
- Arts and Science Electives (6 credits)

Total Credits: 18
Third Year, Spring Semester (Off Campus Programming Available)

- ARC 407 - Architectural Design VI
- Professional Electives (6 credits)
- Open Elective (3 credits)

Total Credits: 15
Fourth Year, Fall Semester (Off Campus Programming Available)

- ARC 408 - Architectural Design VII
- Architecture History Elective (3 credits)
- ARC 423 - Advanced Building Systems
- Professional Elective (3 credits)

Total Credits: 15

## Fourth Year, Spring Semester

- ARC 409 - Architectural Design VIII
- Professional Elective (3 credits)
- Arts and Science Elective (3 credits)
- Architecture History Elective (3 credits)


## Total Credits: 15

## Fifth Year, Fall Semester

- ARC 505 - Thesis Preparation
- Professional Elective (3 credits)
- Arts and Science Elective (3 credits)
- Open Elective (6 credits)

Total Credits: 15
Fifth Year, Spring Semester

- ARC 508 - Architectural Design IX-Thesis
- ARC 585 - Professional Practice
- Professional Elective (3 credits)
- Open Elective (3 credits)

Total Credits: 15

## Study Abroad

Students enrolled in the B.Arch program are eligible for off campus study in our studio based programs in NYC, Florence and London after completing 5 semesters of design studio. All students wishing to study in our global campus programs must have a minimum 2.5 cumulative GPA and be in good judicial standing.

We also offer multiple non-studio based short term study programs through SU Abroad each year. Eligibility for non-studio based programs varies and is determined by the faculty member coordinating the program.

## Minors

Architecture students may choose to pursue one of the many minors available on campus. Most minors consist of 18 -credit programs and some must be taken in a particular sequence. Because of the limited number of arts and sciences and open elective credits contained in the B.Arch program, careful planning is necessary for architecture students to complete a minor.
Students who wish to pursue a minor in schools or other colleges other than Arts and Sciences should note that it will be necessary to take additional credits beyond the 162 required for the B.Arch degree, since only 12 credits of open electives are included in the curriculum.

Information may also be obtained from departments offering minors not described in this catalog.

Common Minors for Architecture Students are:

Landscape Architecture- SUNY ESF Construction Management- SUNY ESF
Art History- College of Arts \& Sciences Economics- College of Arts \& Sciences
History of Architecture- College of Arts \& Sciences
Management Studies- School of Management
Real Estate- School of Management

## Minor

## Architecture Minor

## Minor Coordinator

Karen Holl, Manager of Advising and Records 201 Slocum Hall
ph. (315)443-5075
e. kbholl@syr.edu

## Minor Admission

Non-architecture majors may, with the permission of their home school or college, pursue a 21-credit program leading to a minor in architecture. Successful completion of the minor requires a 2.0 GPA in the 21 credits. To enroll in the minor in architecture, students may obtain a "Declaration of Minor in Architecture" form from the Registrar's website, and then obtain the appropriate signatures from their home college.

## Minor Requirements

To complete the minor in architecture, students must take the courses listed below.

## Required Courses:

- ARC 101 - The Art of Architecture for Nonmajors
- ARC 133 - Introduction to the History of Architecture I
- ARC 134 - Introduction to the History of Architecture II
- ARC 194 - Introduction to Architectural Drawing for Nonmajors
- ARC 394 - Architecture Design for Non Majors

Plus two courses from the following list:

[^3]- ARC 334 - The Architecture of Revolutions
- ARC 335 - Early Renaissance Architecture in Italy 1400-1529
- ARC 336 - Italian Seventeenth Century


## Architecture

- ARC 337 - American Architecture, Settlement to 1860
- ARC 338 - American Architecture, 1860 - World War I
- ARC 431 - Early Modern Architecture
- ARC 432 - The City in Architectural History
- ARC 433 - French Architecture, Sixteenth and Seventeenth Centuries

ARC 435 - Islamic Architecture
ARC 436 - Modern Architecture: The International Style to Present

## Total: 21 Credit Hours

## Architecture

## ARC 101 - The Art of Architecture

## School of Architecture

3 credit(s) At least $1 x$ fall or spring Architectural concepts and form-generating principles. Lectures present historical and contemporary examples. For students outside the School of Architecture professional degree program.

## ARC 107 - Architectural Design I

## School of Architecture

6 credit(s) At least $1 x$ fall or spring Architectural principles through analysis, abstract exercises, and building-design problems. Use of graphic conventions and the role of drawing to convey architectural ideas.

## ARC 108 - Architectural Design II

## School of Architecture

6 credit(s) At least $1 x$ fall or spring Continuation of basic design principles. Design problems dealing with program, context, and construction.
PREREQ: ARC 107

## ARC 121 - Introduction to Building and Structural Systems

## School of Architecture

3 credit(s) At least $1 x$ fall or spring
The basic principles of structures and construction. Develop a conceptual framework for building systems and technologies. Provide a foundation for the ongoing exploration in upper level technology/structures courses and in the design studio.

## ARC 133 - Introduction to the History of Architecture I

## School of Architecture

3 credit(s) At least 1x fall or spring

Crosslisted with: CAS 133
Themes, concepts, and problems in architectural history from ancient Egypt to 1500. Required for architecture majors.

## ARC 134 - Introduction to the History of Architecture II

## School of Architecture

3 credit(s) At least 1x fall or spring Crosslisted with: CAS 134
Themes, concepts, and problems in architectural history from 1500 to the present. Required for architecture majors.
PREREQ: ARC 133 OR CAS 133

## ARC 141 - Introduction to Architecture

## School of Architecture

3 credit(s) At least $1 x$ fall or spring Basic definitions and concepts of architecture understood as a cultural artifact, specifically in relation to the city. The formal, theoretical, and pragmatic aspects of architectural practices are investigated thematically.

## ARC 181 - Representation I

## School of Architecture

3 credit(s) At least $1 x$ fall or spring Exploration of visual environment with sketchbook, pen, and pencil. Techniques, rules, and principles of representational freehand sketching and drawing as tools in the architectural process.

## ARC 182 - Representation II

## School of Architecture

3 credit(s) At least $1 x$ fall or spring Continuation of ARC 181. Development of drawing skills to explore and represent space and form required in architectural design investigation, development, and presentation. Exposure to CAD. PREREQ: ARC 181

## ARC 193 - Introduction to Architectural Concepts for Nonmajors

## School of Architecture

6 credit(s) At least $1 x$ fall or spring Architectural issues, concepts, and design principles. Lectures, field trips, and studio exercises. For students outside the School of Architecture professional degree program.

## ARC 194 - Introduction to Architectural

 Drawing for Nonmajors
## School of Architecture

3 credit(s) At least 1 x fall or spring Skills and visual principles for an architect; freehand drawing and drafting. Production of a sketchbook and portfolio suitable for application to professional programs. For students outside the School of Architecture professional degree program.

## ARC 207 - Architectural Design III

## School of Architecture

6 credit(s) At least 1x fall or spring Transition from basic design to architectural design applying principles of graphic communication and composition to architectural forms. May be repeated for credit with permission of dean's office.
PREREQ: ARC 108

## ARC 208 - Architectural Design IV

## School of Architecture

6 credit(s) At least 1x fall or spring Interrelation of space, function, and structure. Continuing application of principles of graphic communication and composition. May be repeated for credit with permission of dean's office.
PREREQ: ARC 182 AND ARC 207

## ARC 211 - Structures I

## School of Architecture

3 credit(s) At least $1 x$ fall or spring Introduces basic concepts of structural system behavior; gravity and lateral loads, analysis of major structural forms, and structural performance of materials.
PREREQ: ARC 121 AND (MAT 221 OR MAT 285 OR MAT 295 OR PHY 101)

## ARC 222 - Building Systems Design I

## School of Architecture

3-4 credit(s) At least $1 x$ fall or spring Introduces materials and methods of building construction, basic building assemblies, and their elements. Energy conservation and regulatory codes are also addressed.
PREREQ: ARC 121

## ARC 242 - Architectural Theory

## School of Architecture

3 credit(s) At least 1x fall or spring Introduction to architectural theory beginning with the Renaissance and emphasizing nineteenth and twentieth centuries. Readings and lectures emphasizing specific relationships between theoretical work and the conventions of architectural discipline.
PREREQ: ARC 133/CAS 133 AND ARC 134/CAS 134 AND ARC 141

## ARC 307 - Architectural Design V

## School of Architecture

6 credit(s) At least 1x fall or spring
More complex problems relating space, function, and structure. Various systems of support and enclosure.
PREREQ: ARC 208

## ARC 311 - Structures II

## School of Architecture

3 credit(s) At least 1 x fall or spring
Design of structural systems; choice of appropriate materials and system, design of structural components in concrete, timber and steel, introduction to advanced topics such as earthquake loads, high rise construction, prestressed concrete, and indeterminate structures. PREREQ: ARC 211

## ARC 322 - Building Systems Design II

## School of Architecture

3 credit(s) At least 1x fall or spring Investigates systems of architectural environmental control, movement systems, and electrical distribution. Relation to building assemblies and their elements also addressed. PREREQ: ARC 222 AND ARC 208

## ARC 331 - Art and Architecture of India

## School of Architecture

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HOA 396, SAS 396
Art and architecture of the Indian subcontinent from the Indus Valley Civilization to the present.

## ARC 332 - Sixteenth Century Italian Architecture

## School of Architecture

3 credit(s) Every semester
Crosslisted with: HOA 323
Double Numbered with: ARC 632
Major architects and theories of 16th-century architecture, emphasis on social and political background, patronage, and the education of the architect. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 334 - The Architecture of Revolutions

## School of Architecture

3 credit(s) Irregularly
Double Numbered with: ARC 634
Survey of European architectural theory and practice from the seventeenth century to the nineteenth century . Discussion and analysis of major architects, buildings, and architectural treatises, principally from France, England, and Germany. Additional work required of graduate students.

## ARC 335 - Early Renaissance <br> Architecture in Italy 1400-1529

## School of Architecture

3 credit(s) Every semester
Crosslisted with: HOA 322
Double Numbered with: ARC 635
Architectural theory and design in Italy, 1400-
1520. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 336 - Italian Seventeenth Century Architecture

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 324
Double Numbered with: ARC 636
Complex and masterful accomplishments of individual architects within context of a mature architectural tradition and a particular social, economic, and religious milieu. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 337 - American Architecture, Settlement to 1860

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 374
Double Numbered with: ARC 637
American architectural history and theory from first settlements through federal and Georgian to various revival modes. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR ARC 639

## ARC 338 - American Architecture, 1860 - World War I

School of Architecture
3 credit(s) Irregularly
Crosslisted with: HOA 375
Double Numbered with: ARC 638
American architectural history and theory from the Civil War through various revival modes to development of new commercial and residential forms before World War II. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134

## ARC 394 - Architecture Design for Non Majors

## School of Architecture

3 credit(s) At least 1x fall or spring The determination of architectural form and the process of design. For students outside the School of Architecture professional degree program.
PREREQ: ARC 194
ARC 397 - Architectural Analysis and Design for Nonmajors

## School of Architecture

3 credit(s) Every semester
Architectural concepts, methods of analysis and design. Offered in Florence for students outside the School of Architecture professional degree program.
COREQ: ARC 398

## ARC 398 - Architectural Concepts and Representation for Nonmajors

## School of Architecture

3 credit(s) Every semester
Introduction to architectural concepts and theories. Instruction in the basic conventions of architectural drawing, representation, and analysis. Conducted primarily through field trips in and around Florence.
COREQ: ARC 397

## ARC 407 - Architectural Design VI

## School of Architecture

6 credit(s) At least 1x fall or spring
Required design studio. Comparative studies of architecture and urbanism or advanced intensive design studio in which students choose from a range of topics and critics.
PREREQ: ARC 307 AND ARC 322

## ARC 408 - Architectural Design VII

## School of Architecture

6 credit(s) At least 1x fall or spring
Required design studio. Comparative studies of architecture and urbanism or advanced intensive design studio in which students choose from a range of topics and critics.
PREREQ: ARC 407 WITH MINIMUM GRADE C

## ARC 409 - Architectural Design VIII

## School of Architecture

6 credit(s) At least 1x fall or spring Required comprehensive design studio. Considering external conditions as well as internal needs. Systems of identifying and ordering the design process.
PREREQ: ARC 408 AND ARC 423 OR
COREQ: ARC 423

## ARC 423 - Advanced Building Systems

## School of Architecture

3 credit(s) Every semester
Case studies of the interrelationships of design concepts with construction, structural, and mechanical systems. Lecture and studio.
PREREQ: ARC 322

## ARC 431 - Early Modern Architecture

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 479
Double Numbered with: ARC 731
Early modern architecture from the 1890s through
the 1930s. Additional work required of graduate
students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 432 - The City in Architectural History

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 419
Double Numbered with: ARC 732
A single city throughout its history, or various cities at a particular time in history. Additional work required of graduate students. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 433 - French Architecture, Sixteenth and Seventeenth Centuries

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 439
Double Numbered with: ARC 737
Architecture of the Renaissance transported from Italy to France and developed into a specifically French architecture. Outstanding achievements of more than local interest. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 435 - Islamic Architecture

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 389
Double Numbered with: ARC 735
Major building traditions of Islam in the Middle East, North Africa, Spain, Turkey, and India elucidated through in-depth examination of major works and principles of architectural, urban, and garden design. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 436 - Modern Architecture: The International Style to Present

## School of Architecture

3 credit(s) Irregularly
Crosslisted with: HOA 475
Double Numbered with: ARC 736
Architecture of the modern period since World War II. Major works and figures as framed by the larger architectural issues of the period. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134 OR HOA 105

## ARC 490 - Independent Study

## School of Architecture

1-6 credit(s) Every semester
In-depth exploration of a subject or issues. Individual independent study based on a plan submitted by the student. Admission by consent of supervising instructor or instructors and program chair.
Repeatable

ARC 499 - Honors Capstone Project<br>\section*{School of Architecture}<br>1-3 credit(s) Every semester<br>Completion of an Honors Capstone Project under the supervision of a faculty member.<br>Repeatable 2 time(s), 3 credits maximum

## ARC 500 - Selected Topics

## School of Architecture

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ARC 505 - Thesis Preparation

## School of Architecture

3 credit(s) Every semester
Preparation for architectural design thesis project, ARC 508: subject selection; program and site descriptive and analytic documents; research and development of preliminary design studies. PREREQ: ((ARC 311 AND ARC 322) OR (ARC 612 AND 622)) AND ((ARC 408 OR (ARC 608 WITH MINIMUM GRADE C))

ARC 508 - Architectural Design IXThesis

## School of Architecture

6 credit(s) Every semester Undergraduate thesis. Semester-long, advanced, student-originated project based on a program and research produced by the student and approved by the faculty.
PREREQ: ARC 505 WITH MINIMUM GRADE OF C AND ARC 423

## ARC 532-Ornament and its Discontent

## School of Architecture

3 credit(s) Irregularly
History of the theory of ornament in architecture from the Renaissance to the twentieth century. PREREQ: ARC 134 OR CAS 134 OR ARC 639

## ARC 535-Organicism in Modern Architecture

## School of Architecture

3 credit(s) Irregularly
Seminar investigating the use of biological principles to generate architectural and urban form in American and European architecture, 1880-present.

## ARC 536 - Italian Urbanism: $\mathbf{1 0 0}$ Cities

## School of Architecture

3 credit(s) Every semester
Crosslisted with: HOA 520
A survey of Italian urban history: design of cities,
local rituals, politics, and patronage in ancient Rome, medieval Venice, Renaissance Florence, Baroque Turin, and modern Milan. Site visits in Florence and surrounding towns. Offered only in Florence.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## ARC 537 - Italian Medieval <br> Architecture and Urbanism

## School of Architecture

3 credit(s) Every semester
Crosslisted with: HOA 510
Investigates sites, buildings, and rituals of local identity in a range of centers including monasteries, castles, hilltowns, ports, republics, and tyrannies, between 300 and 1400. Trips to Umbria and Sicily. Offered only in Florence. PREREQ: HOA 105 OR ARC 134 OR CAS 134

## ARC 538 - Artistic Patronage of Medici

## School of Architecture

3 credit(s) Every semester
How the Medici family used art and architecture to transform themselves from private bankers into Grand Dukes of Tuscany, in the process creating the monuments by which we define the Italian Renaissance. Offered only in Florence.
PREREQ: HOA 105 OR ARC 134/CAS 134

## ARC 539 - Italian Architecture, 1909-

 1959
## School of Architecture

3 credit(s) Every semester
Crosslisted with: HOA 571
Italian architecture from the birth of Futurism to the end of the post-WWII reconstruction. Representative structures in Milan, Rome, Como, and Florence. Includes overnight trip to Rome. Offered only in Florence.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## ARC 551 - Le Corbusier 1887-1965

## School of Architecture

3 credit(s) Irregularly
The work and times of the 20th century
Swiss/French architect Le Corbusier (Charles Edouard Jenneret) from several vantage points: biographical data and career development, specific themes of urban theory and social progress, his artistic production as a painter, and his formal architectural strategies.

## ARC 552 - Politics of Public Space

## School of Architecture

3 credit(s) Irregularly
Issues surrounding public space, politics, and power relations as they impact our public realms, through investigations of critical and political theorists, geographers, architects and artists. PREREQ: ARC 208

## ARC 554 - Material Manifestations

## School of Architecture

3 credit(s) Irregularly
Innovative methodologies of detailing and constructing architectural façade and structural systems completed via analysis and smallscale construction experiments, conducted in both physical and digital realms, advanced components, materials and systems.
PREREQ: ARC 208

## ARC 556 - Rem Koolhaas: Architect, Historian, Provocateur, Document Maker

## School of Architecture

3 credit(s) Irregularly
This lecture/seminar course examines the work of contemporary Dutch architect Rem Koohaas, investigating its historical lineage, response to cultural context, and typological innovation.

## ARC 557 - Utopia:Design and Cultural Imagination

## School of Architecture

3 credit(s) Irregularly
Interdisciplinary seminar investigating the discourse, forms, and evolution of utopian experiments from pre-modern to post-modern America in four themes: wilderness, pastoralism, metropolis, and spectacle.
PREREQ: HOA 106 OR ARC 208

## ARC 561 - Survey of British Architecture

## School of Architecture

3 credit(s) Every semester
Through a series of visits to sites and buildings across England, students are introduced to the principal architects, stylistic movements and other trends in contemporary and historical architecture in England. Offered in London only
COREQ: ARC 407 OR ARC 408 OR 608 OR 609

## ARC 562 - Cities and the Culture of Urban Housing Morphologies

## School of Architecture

3 credit(s) Irregularly
This course will focus on urban housing related to the cultural and physical context of major cities. Morphologies of urban housing will be examined in both historical and contemporary perspectives to study continuities of types.

## ARC 563 - Introduction to Computer Applications in Architecture

## School of Architecture

$2-3$ credit(s) At least 1x fall or spring Overview of the computer and its applications to architecture. Direct involvement with the
computer to resolve problems in structures, design, environmental systems, specifications, cost estimation, etc. Additional work required of graduate students.

## ARC 564 - Drawing

## School of Architecture

3 credit(s) At least 1x fall or spring Exercises in line and value used to investigate issues involving observing and representing form and space. Additional work required of graduate students.
PREREQ: ARC 182 AND ARC 108

## ARC 565 - Visual Design

School of Architecture
3 credit(s) Irregularly
Elements and principles of visual organization, perception, and communication through various two- and three-dimensional exercises. PREREQ: ARC 208

## ARC 566 - Introduction to Preservation

## School of Architecture

3 credit(s) At least 1x fall or spring Crosslisted with: HOA 577
Problems and methods in implementing continued use for quality segments of the humanly built environment.
PREREQ: ARC 134 OR CAS 134

## ARC 568 - Real Estate Design and Development

## School of Architecture

3 credit(s) At least $1 x$ fall or spring Analysis of the mechanisms through which real estate is developed, the interaction of public agencies, developers, and designers in initiation, financing, and design. Development fundamentals, evaluating economic feasibility, structuring developments, negotiating and present proposals.

## ARC 571 - Survey of Italian Architecture

## School of Architecture

3 credit(s) Every semester
Field trips: On-site observation and study of significant buildings and spaces. May apply toward professional elective component of degree program. Offered in Italy.
COREQ: ARC 407 OR ARC 408 OR 608 OR 609

## ARC 572 - Advanced Computer Applications to Architecture

## School of Architecture

2-3 credit(s) At least $1 x$ fall or spring Individual and/or group efforts at investigating and developing new computer programming requirements for architectural applications.

## ARC 573 - Utopia and Transformation in Early American Town Planning

## School of Architecture

3 credit(s) Irregularly
Comparative urban analysis considering reciprocal influences of historical antecedent and utopian visions of the city in helping determine early American town and building form. Concentration on urban and architectural development of Boston, Charleston, Savannah.
PREREQ: ARC 134 OR CAS 134

## ARC 574 - Reading the Landscape

## School of Architecture

3 credit(s) Irregularly
Designed exterior space; gardens, parks, and park systems. Selected historical periods and cultural conditions as a means to explore landscape form as an ever shifting construction of space, nature, and site.

## ARC 575 - Urban Housing - Building,

## Block, Street

## School of Architecture

3 credit(s) Irregularly
Focus on housing as an integral part of urban structure, both formal and sociopolitical. Relationships of residential unit to building, block, and city, as they represent the individual and community, are examined.

## ARC 576 - Theories \& Analysis of Exurbia

## School of Architecture

3 credit(s) Irregularly
Course studies history, evolution, and contemporary condition of exurban built environment in America.
PREREQ: ARC 208

## ARC 577 - Visual Studies

## School of Architecture

3 credit(s) Irregularly
Conceptual development and visual representation of the thesis idea.
PREREQ: ARC 505

## ARC 578 - Facade as Idea

## School of Architecture

3 credit(s) Irregularly
Seminar in contemporary and historical examples of the phenomenon of the building facade as a primary instrument by which architecture communicates. Fourth year undergraduate or third year graduate standing.
PREREQ: ARC 307 OR 607

## ARC 585 - Professional Practice

School of Architecture
3 credit(s) Every semester
Legal and administrative aspects of architectural practice. The architect's role in society.

PREREQ: ARC 322

## School of Architecture Faculty

Bruce Abbey, Professor
M.Arch., Princeton University, 1971; B.Arch., Cornell University, 1966
Architectural Design and Theory
Maya Alam, Assistant Professor
M.Arch., Southern California Institute of Architecture, 2012; German Diploma Ing., Interior Architecture, Peter Behrens School of Architecture, 2007
Architectural Design
Amber Bartosh, Assistant Professor M.Arch, Southern California Institute of Architecture, 2010; B.A., Rice University, 2000 Architectural Design and Technology

Jean-François Bédard, Associate Professor; Chair, Graduate Program
Ph.D., Columbia University, 2003; M.Arch. (History
and Theory of Architecture), McGill University,
1992; B.Arch., McGill University, 1987
Architectural History
Lori Brown, Associate Professor
M.Arch., Princeton University, 1994; ; B.S. Georgia

Institute of Technology, 1991
Architectural Design; politics of spacial production, intersections between art and architectural practices

Theodore Brown, Professor, Chair, Undergraduate Program
M.Arch., Princeton University, 1981; B.Arch., University of Virginia, 1978
Architectural Design and Theory
Lawrence Chua, Assistant Professor
Ph.D. History of Architecture and Urban
Development, Cornell University, 2012; M.A.
History of Architecture and Urbanism, Cornell University, 2006; B.A., New York University, 1986 Architectural History

Angela Co, Assistant Professor, Program Director, NYC
M. Arch, Columbia University, 2005; B.Arch, University of Pennsylvania, 2001
Architectural Design
Gregory Corso, Assistant Professor
M.Arch., 2010 \& B.A., 2003, University of

California at Los Angeles
Architectural Design
Sekou Cooke, Assistant Professor
M.Arch., Harvard University, 2014; B.Arch., Cornell University, 1999
Architectural Design
Julia Czerniak, Professor, Associate Dean
M. Arch., Princeton University, 1992; B.S.

Landscape Architecture, Pennsylvania State University, 1984
Architectural Design, Landscape Architecture
Lawrence Davis, Associate Professor
M. Arch., Columbia University, 1988; B.Arch., University of Cincinnati, 1985
Architectural Design; Registered Architect in NY State, NCARB

Benjamin Farnsworth, Assistant Professor M.Arch., Southern California Institute of Architecture, 2013; B.A., Architecture, London
Metropolitan University, 2009, B.Sc., London
School of Economics
Architectural Design and Theory
Joseph Godlewski, Assistant Professor
M.Arch, University of California at Berkeley, 2009;
B.Arch, Syracuse University, 2000

Architectural Design and History
Terrance Goode, Associate Professor
M. Arch., Princeton University, 1980; B.S.

Architecture, University of Southern California, 1978
Architectural Design
Susan Henderson, Professor
Ph.D., Columbia University, 1989; M.Arch., Massachusetts Institute of Technology, 1977, B.A. Environmental Design, University of Washington, 1974
Architectural History
Roger Hubeli, Assistant Professor
Dipl. Arch. ETH Zurich Switzerland; CEPT School
of Architecture, Ahmedabad India (Exchange
Program)
Architectural Design and Technology
Molly Hunker, Assistant Professor
M.Arch., University of California at Los Angeles,

2010; B.A., Dartmouth College, 2005
Architectural Design
Elizabeth Kamell, Associate Professor
S.M. Arch. S., Massachusetts Institute of Technology, 1996; B.Arch., Cornell University, 1982
Architectural design
Janette Kim, Assistant Professor
M.Arch., Princeton University, 2001; B.A.,

Architecture, Columbia College, Columbia
University, 1997
Architectural Design
Randall Korman, Professor
M.Arch., Harvard University, 1977; B.Arch., The

Cooper Union, 1972
Architectural Design
Elizabeth Krietemeyer, Assistant Professor

Ph.D. in Architectural Sciences, Rensselaer Polytechnic Institute; M.S., RPI , 2009; B.Arch., RPI, 2005
Architectural Design and Technology
Julie Larsen, Assistant Professor
M.Arch, Columbia University, 2002; B.S., Architecture, University of Illinois, 1997
Architectural Design
Mark Linder, Associate Professor
Ph.D., Princeton University, 1998; M.Arch., Yale University, 1986; B.S. Architecture, University of Virginia, 1982
Architectural Design and Theory
Brian Lonsway, Associate Professor
M.Arch., Columbia University, 1995; B.A.

Architecture, Washington University, 1992
Architectural Design; cultural theory, computation
Jonathan Louie, Assistant Professor
M.Arch II, University of California, 2012; B.Arch, Syracuse University, 2007
Architectural Design
Sinéad Mac Namara, Associate Professor, Honors FacultyPh.D., Princeton University, 2006; B.A.I., Trinity College, University of Dublin, 1999
Civil and Environmental Engineering
Arthur McDonald, Professor
M.Arch., Cornell University, 1972; B.Arch., Pratt Institute, 1963
Architectural Design; urban theory and design, urban housing
Kyle Miller, Assistant Professor
M. Arch, University of California, 2008; B.Arch, University of Michigan, 2004
Architectural Design
Anne Munly, Professor
M.Arch., Princeton University, 1980; B.Arch., University of Virginia, 1978
Architectural Design
Daekwon Park, Assistant Professor
M.DesS, Harvard University, 2012; M.Arch., University of Illinois at Urbana-Champaign, 2006;
B.S., Architecture, Yeungnam University, 2004

Architectural Design and Technology
Tarek Rakha, Assistant Professor
M.Sc., Architecture, Cairo University, 2010; B.Sc.,

Architecture, Cairo University, 2007
Architectural Design and Technology
Richard Rosa, Associate Professor; Program
Director, Florence
M.Arch., Harvard University, 1993; B.Arch

Syracuse University, 1988;
Architectural Design
Francisco Sanin, Professor; Program Director, London
Diploma, Universidad Pontifica Bolivariana
(Colombia), 1979
Architectural Design, Urban Design
David Shanks, Assistant Professor
M.Arch., Harvard University, 2009; B.A. Urban

Design and Architecture Studies. New York
University, 2003
Architectural Design
Yutaka Sho, Associate Professor
M.Arch., Harvard University, 2005; B.F.A. \& B.L.A., Rhode Island School of Design, 1996
Architectural Design
Edward Sichta, Associate Professor
M.F.A., Syracuse University, 1969; B.F.A., Schools
of the Art Institute of Chicago and the University of Chicago, 1967
Drawing and Visual Design
Michael Speaks, Professor, Dean
Ph.D., Duke University, 1993; B.A., University of Mississippi, 1983

Timothy Stenson, Associate Professor;
M.Arch., 1988 \& B.S. Architecture, 1981,

University of Virginia
Architectural Design and Technology; low-energy
building research
Robert Svetz, Assistant Professor
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Institute of Technology, 1994
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# College of Arts and Sciences 

Karin Ruhlandt, Dean
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## About the College

As the liberal arts college at the center of a major research institution, the College of Arts and Sciences stands as the intellectual heart and soul of Syracuse University providing a highly-personalized academic experience. The College prepares each student for success as a citizen of the world through disciplinary and interdisciplinary teaching and learning, research, scholarship, and service, on campus and around the world. Students are exposed to a curriculum that is based on the principles of critical thinking, effective communication, and the analysis and understanding of data, geared to educate the leaders of tomorrow.

Rigorous programs of study across our three academic divisions-the sciences and mathematics, the humanities, and the social sciences-as well as our interdepartmental and interdivisional programs, provide students with critical skills to effectively launch successful careers in a vast array of fields.

Our graduate students - mentored by nationally and internationally renowned scholars, writers, and scientists - are immersed in an environment of academic rigor, research, and creativity where they develop the tools and skills needed to effect change and generate new knowledge and ideas in their chosen fields.

The College's three academic divisions house 22 departments that offer more than 50 majors, 58 minors, and 30 master's and Ph.D. programs. The College also offers a number of selected studies, independent study, dual and combined degree programs, as well as interdisciplinary degree options with Syracuse University's professional schools and colleges at both the undergraduate and graduate levels.

More Information:
On the Web:
The College of Arts and Sciences
Dean's Office
300 Hall of Languages
Phone: 315-443-2201
E-mail: casdean@syr.edu

## Academic Departments

The College of Arts and Sciences is a place of discovery, creativity, and imagination that forms the core of a liberal arts education at Syracuse

University. Through its three academic divisions-the Sciences and Mathematics, the Humanities, and the Social Sciences (offered in collaboration with the Maxwell School of Citizenship and Public Affairs)--The College offers an eclectic array of traditional degree options as well as a number of interdisciplinary, dual, and combined-degree programs.
African American Studies
Anthropology
Art and Music Histories
Biology
Chemistry
Communication Sciences and Disorders
Earth Sciences
Economics
English
Geography
History
International Relations
Languages, Literatures, and Linguistics
Mathematics
Philosophy
Physics
Political Science
Psychology
Public Affairs
Religion
Science Teaching
Sociology
Women's and Gender Studies
The Writing Program

## Undergraduate Studies

The College of Arts and Sciences offers undergraduate students an opportunity to explore major and minor programs in each of the academic divisions: Humanities, Natural Sciences and Mathematics, and Social Sciences. Undergraduate Social Sciences courses are taught by faculty who also hold appointments in the Maxwell School of Citizenship and Public Affairs.

Interdisciplinary and Special Programs: The College offers a number of interdepartmental and interdivisional majors and minors.

For a list of the majors and minors offered, refer to Academic Offerings

## Undergraduate General Regulations

For academic rules and regulations applying to all University students, see "Academic Rules" above, which also contains special regulations that apply to Arts and Sciences students. The regulations below apply to all students matriculated in the College of Arts and Sciences.

## Degrees

The College of Arts and Sciences is authorized by New York State to grant the bachelor of arts (B.A.) and the bachelor of science (B.S.) degrees. Students dually enrolled in two colleges at Syracuse University are granted the appropriate degree for the home college. For example, a student in Arts and Sciences and the S.I. Newhouse School of Public Communications might receive the B.A. in political science/ advertising, with Arts and Sciences as the home college. The degree(s) available for each program of study are indicated under "Academic Offerings". Students who wish to complete the B.S. degree in an approved program submit a petition to the department and to the College of Arts and Sciences Advising and Academic Support, 323 Hall of Languages.

## Minimum Requirements

A minimum of 120 credits of coursework is required for the B.A. or B.S. degree. For all students enrolling in the College of Arts and Sciences, 30 of the 120 credits must be taken in upper-division courses. Every major leading to the bachelor's degree in the College of Arts and Sciences must include at least 18 credits of upper-division work (courses numbered 300 and above) in the field of study. Every B.S. degree program must include at least 30 credits of upper-division coursework in the field of study, or at least 6 credits more than the B.A. program in the same field (whichever is greater), in upperdivision work in the field of study. Of the upperdivision credits counted toward the completion of a major, at least 12 must be taken at Syracuse University. A maximum of six credits of coursework at the 300-level or above may overlap among all majors and minors, regardless of number. Students must earn the grade point average of at least 2.0 in upper-division courses taken at Syracuse University and counted toward the completion of a major or minor. To be eligible for graduation, students must attain the minimum grade point average of 2.0 (C) in courses taken at Syracuse University.

## Ninety-Six Credit Rule

Except in the dual and some selected studies programs, it is required that all singly enrolled College of Arts and Sciences students earn at least 96 arts and sciences credits (earned in the College of Arts and Sciences or transferred from another institution and accepted as arts and sciences credit). Up to 24 credits toward the 120 required for graduation may be taken in other Syracuse University colleges or schools or accepted in transfer as non-arts and sciences credit from other accredited institutions. In dual programs, the college requires that at least 90 credits be earned in the College of Arts and

Sciences (or transferred from another institution and accepted as arts and sciences credit). Up to 30 non-arts and sciences credits may count toward the degree. Combined degrees require 96 arts and sciences credits and a minimum of 150 credits. Under selected studies, programs leading to the B.A. degree must include at least 90 arts and science credits, and programs leading to the B.S. degree must include at least 75 arts and science credits. A maximum of 24 credits of the combination of independent study, experience credit or pass/fail coursework may be counted toward a degree in the college. Up to 4 credits in physical education (PED) courses numbered 100 to 299 may be included among the 24 non-Arts and Sciences credits counted toward a degree in the college for singly enrolled students.

## Intra-University Transfer

The college will review applications for intrauniversity transfer on a continuing basis throughout the academic year. Students interested in transferring into the College must attend an informational session in order to obtain the application materials. These meetings are held throughout the semester. The application deadline for acceptance for the fall semester is July 15 and December 15 for the spring semester. Applicants who are making satisfactory progress and have a cumulative grade point average of 3.0 or above will be admitted to the college. Students with a current cumulative GPA below 3.0 should submit a letter with the application, explaining the reason(s) for prior academic problems, why they believe they will be academically successful in the College of Arts and Sciences and what major they are interested in pursuing. Students who will have junior standing when entering the College must include a plan of study form signed by their intended major department. Incomplete applications will not be considered. The Associate Dean of Advising and Academic Support will review applications. Students will be notified by e-mail prior to the start of the semester.

## Advising and Academic Support

On the Web:
Advising and Academic Support
Health Professions Advising
Pre-Law Advising
Office:
323 Hall of Languages
Call: 315-443-3150
E-mail: casadvising@syr.edu
The College's Advising and Academic Support services are designed to ensure academic success for students from the time they arrive on campus through graduation. Our professional staff members work as a team to help students make
a successful transition to college, to explore their interests, to develop a plan for their academic career, and to successfully meet their academic and career goals. Specifically, our professional staff members help students:

Develop time management skills
Identify academic enrichment opportunities
Map strategies to improve academic performance
Understand the Liberal Arts Core
Select courses, majors, and minors
Maintain steady progress toward completing degrees

Plan for graduate school or entry into the job market

Additionally, staff members help students understand the purpose and benefits of a liberal arts education and how to effectively market a liberal arts degree to prospective employers.

Pre-professional advising services are designed for students interested in pursuing careers in the health and legal professions. Services include individual and small group, and workshops designed to enable students to successfully prepare for, and transition to, post-baccalaureate degree programs in the health and legal professions. Pre-health and pre-law advising is available to all matriculated Syracuse University and SUNY-ESF undergraduate students and alumni.
Special Note: Medical schools require applicants to obtain either a Sponsorship or Credentials letter from their respective college's pre-health advising program.
Office:
323 Hall of Languages
Phone: 315-443-3150
Fax: 315-443-9397
Email: casadvising@syr.edu

## Declaring Majors

Each student who follows the standard arts and sciences program fulfills the requirements of at least one major. The majors available under the standard arts and sciences program, including dual and combined degree programs, are described under individual headings under Academic Offerings and also on the College's website. See below for rules governing the selection of a program.

## Declaring a Major

Before or during the second semester of the sophomore year, each student in the standard arts and sciences program selects a major in consultation with their academic advisor. The student applies to the department or committee
administering major studies in that field for admission to the major.

The Declaration of Major Form is used for this purpose and is available online through Casadvising.syr.edu on the Academic Forms page. To declare a major officially, a student secures the signature of the appropriate department or committee chair on this form and returns the form to the Advising and Academic Support office, Room 323, Hall of Languages. Students who fail to submit a completed Declaration of Major Form to the college Advising and Academic Support office before earning 54 total credits will be declared ineligible to register for subsequent semesters.
At various times, students are asked to state on other routine forms, including the admissions application, what their major will be. Such declarations are informal expressions of interest and intent and are not binding, either on the part of the student or the department (or committee). Completion of such routine forms does not secure admission to any major program. Only use of the Declaration of Major Form, with the signature of the chair, can accomplish that end.

## Changing Majors

Students may change a major at any time before registration for the last full semester of study by submitting a new Declaration of Major Form with the approval of the new major department or committee.

## Double Majors

Students may wish to declare, to fulfill the requirements for, and to graduate with two or more majors. To do so, they should indicate both majors and obtain the appropriate department signatures on the Declaration of Major Form. The second major may be added no later than the registration period for the last full semester of study.

## Special Degree Options and Combinations

## Double Majors

Two majors may be pursued simultaneously in the College of Arts and Sciences or in the college and another school or college at the University. Students must fulfill all the requirements for both majors as well as all other degree requirements of The College. A single degree is conferred by the college. The two majors appear on the transcript. Of the 300-level and higher coursework offered toward the satisfaction of the requirements of the two majors, a maximum of six credits may overlap. Students singly enrolled in the college who have
a second major in another school or college must still earn the minimum of 96 credits in the College of Arts and Sciences.

Please note: Arts and Sciences students may not declare the double major in any of the following areas: English education; science education; mathematics education; social studies education; advertising; broadcast journalism; graphic arts; magazine; newswriting; photography; public relations; television, radio, and film.

## Liberal Arts Core

The Liberal Arts Core requirements are a set of principles that flexibly guide students to select courses and serve to define the common structural core of a liberal arts education at Syracuse. They were devised and adopted by the faculty of the college. They assure that each student's course of study includes the most important features of an education in the liberal arts. There are three fundamental parts to the Liberal Arts Core requirements: I. Liberal Skills; II. Divisional Perspective; and III. Critical Reflections.

## I. Liberal Skills

The Liberal Skills Requirement asks each student to further develop fundamental intellectual skills of effective writing and gives the student a choice of whether to satisfy a requirement in second language skills or quantitative skills.
Writing Skills (3 courses)
Students are required to complete the following:
The first of these courses is chosen from Writing
Studio 1: Practices of Academic Writing (WRT
105 or WRT 109) or First Year Seminar (CAS 100) or Composition for Non-Native Speakers of English (ENL 211).
During the second year, students will take the higher level Writing Studio 2: Critical Research and Writing (WRT 205 or WRT 209) or Advanced Academic Writing and Research for Non-Native Speakers of English (ENL 213).

Before WRT 205 (or WRT 209) or ENL 213 is taken, students will take a Writing-Intensive course (list below) in a subject matter other than writing, a course that has been specially designed to give attention to developing writing ability while studying another subject matter
The remainder of the Liberal Skills requirement includes either the Language Skills or Quantitative Skills requirement which gives students the option of demonstrating a university-level competence in either
a language other than English, or
the use of quantitative methods to understand and solve problems.

The Language Skills Requirement

Students satisfy the Language Skills option of the Liberal Skills Requirement by demonstrating that they have achieved a certain level of competence in a language other than English by either:

1. completing a 4-credit language course numbered 201, or a 3- or 4-credit language course numbered 202 or higher (see Advanced Language Work under Exemptions and Alternatives on page 14); or
2. satisfying one of the requirements listed under "Exemptions and Alternatives."

Beginners can complete the language requirement with a sequence of three 4-credit courses numbered 101, 102, and 201. Each of these courses includes four hours of class and two hours of independent laboratory work in a computer or audio/visual cluster weekly.
Courses numbered 101, 102, and 201 are available on a regular basis in Ancient Greek, Arabic, Chinese, French, German, Hebrew, Hindi/ Urdu, Italian, Japanese, Kiswahili, Korean, Latin, Persian, Polish, Portuguese, Russian, Spanish and Turkish.

## EXEMPTIONS AND ALTERNATIVES

The following options are also available to fulfill the requirement.

Advanced Placement. Students who receive 4 credits in French or Spanish Literature by the CEEB Advanced Placement examination thereby demonstrate a competency equivalent to Syracuse University language courses numbered 201. Such students thereby satisfy the Language Skills Requirement. Students who score a four in the following examinations thereby demonstrate a competency equivalent to Syracuse University language courses numbered 201 and satisfy the Language Skills Requirement: Chinese Language and Culture; Japanese Language and Culture, Latin, Spanish Literature .
Demonstrated Competence. Students who successfully complete an approved examination testing aural, reading, and composition skills meet the requirement. Petitions for an examination should be submitted to the language coordinator.

Advanced Language Work. One may fulfill the requirement by completing with a grade of $C$ or better any 3- or 4-credit course taught in a language other than English numbered 202 or above offered by the Department of Languages, Literatures, and Linguistics.

International Students. Students whose native language is not English may petition to have the language requirement fulfilled by their knowledge of their natural language.

Study Abroad. Programs of Syracuse University Abroad (SUA) in Chile, China, France, India, Italy, and Spain offer the same courses that are available on campus for satisfying the language
requirement.
Transfer Credit. Transfer credit for foreign language courses will not be considered for approval until it has been evaluated by the Department of Languages, Literatures, and Linguistics at Syracuse University to determine the appropriate course equivalent. Credit will be considered for acceptance by the College if taken at an accredited institution.

The Quantitative Skills Requirement
A student may satisfy the Quantitative Skills option of the Liberal Skills Requirement by successfully completing a First Course and a different Second Course drawn from the lists below. When planning a program, be aware that many courses in the second course list have prerequisite courses. Some courses appear on both lists.

Any student who completes a calculus course numbered 284 or higher with a grade of $C$ or better is thereby exempt from the need to take an additional course to complete the Quantitative Skills Requirement. Calculus courses numbered 285 or higher may simultaneously be used to partially satisfy the Natural Sciences and Mathematics Divisional Requirement. MAT 284 cannot be used to meet both the Quantitative Skills Requirement and the Natural Science and Mathematics Divisional Requirements. It can only be used to meet one of these requirements.
Consult the course descriptions for information on when credit for certain mathematic courses is disallowed.

## First Course:

MAT 121 Probability and Statistics for the Liberal Arts I
MAT 183 Elements of Modern Mathematics
MAT 193 Algebra-Infused Precalculus (to be followed by MAT 285 or MAT 295)
MAT 194 Precalculus (to be followed by MAT 285 or MAT 295)
MAT 221 Elementary Probability and Statistics I
MAT 285 Life Sciences Calculus I, or
MAT 295 Calculus I
STT 101 Introduction to Statistics
Second Course: (Note: Some of these courses have prerequisites)

GEO 386 Quantitative Geographical Analysis
MAT 122 Probability and Statistics for the Liberal Arts II

MAT 222 Elementary Probability and Statistics II
MAT 284 Business Calculus
MAT 285 Life Sciences Calculus I, or
MAT 295 Calculus I

MAT 286 Life Sciences Calculus II, or
MAT 296 Calculus II
MAX 201 Quantitative Methods for the Social Sciences

PSY 252 Statistical Methods II
*SWK 361 Foundations of Social Work Research
*Apply as Non-Arts \& Sciences credit
Many students will satisfy the Quantitative Skills Requirement by taking a pair of statistics courses. Both MAT 121 and STT 101 provide introductions to statistics with emphasis on the analysis of real data sets. They do not assume any prerequisite mathematical preparation, although in MAT 121 it is desirable that students have a reasonable level of competence in high school algebra. Students who complete MAT 121 may satisfy the Quantitative Skills Requirement by choosing from among MAT 122 (the continuation of MAT 121), MAX 201 (an introduction to quantitative analysis in the study of public affairs), and SWK 361 (an introduction to quantitative methods in social work). Note that MAT 121 is a prerequisite for MAT 122.

Only students who have mastered high school algebra should contemplate any of the remaining options for satisfying the quantitative skills requirement.

## II. Divisional Perspective

A student must take four 3- or 4-credit courses in each of the three curricular divisions of the College of Arts and Sciences: the Humanities, the Natural Sciences and Mathematics, and the Social Sciences divisions.

In each division, two of the courses must constitute an approved sequence.

Of the twelve courses used to satisfy the divisional requirement, no more than three courses may be taken from a single department or program (even if the courses of the department or program are in more than one division), with the exception of 3-credit HNR courses offered by the Renée Crown University Program. Any course cross listed is considered to belong to each of the departments in the cross listing. Therefore it counts as one of the maximum of three allowed from a single department to fulfill the divisional distributional requirement. Experience Credit and Independent Study credit cannot be used to satisfy the Divisional Perspective Requirement.

In each division, no more than one course may be selected from schools and colleges outside the College of Arts and Sciences.

In the Natural Sciences and Mathematics Division, at least one laboratory course must be included.

## III. Courses for the Critical Reflections Requirement

Students are required to take two courses from the list provided on the College of Arts and Sciences web site. These courses may be simultaneously used to partially satisfy other liberal arts core requirements or requirements for majors and minors.
Transfer credit is not accepted for Critical Reflections requirements except when defined in articulation agreements.

## Liberal Skills Requirement Writing Intensive Requirement

Students will take a Writing-Intensive course as a prerequisite to taking WRT 205 in their fourth semester. The courses approved for satisfying this requirement are listed below. Transfer and other credit are not accepted for the Writing Intensive Requirement except when they are included in an Associate Degree as defined in articulation agreements.

These courses that fulfill the Writing Intensive Course requirement must be successfully completed by the student in the academic year in which they are listed in the Liberal Arts Core Guidebook.

## African American Studies

AAS 138 - Writing About Black Culture
AAS 233 - The Caribbean Novel
AAS 234 - African Fiction
AAS 235 - African American Drama
AAS 303 - Black Women Writers
AAS 305 - African Orature
AAS 312 - Pan Africanism
AAS 338 - Creative Writing Workshop

## Art and Music Histories

HOA 106 - Arts and Ideas II (honors section only)
HOA 412 - The Gothic Spell
HOM 363 - Opera in Society
HOM 372 - Music in Multicultural America
HOM 485 - Contemporary Indigenous
Soundscapes
HOM 493 - Music and Identity

## Anthropology

ANT 185 - Global Encounters:Comparing World
Views \& Values Cross-Culturally
ANT 324 - Modern South Asian Cultures

ANT 367 - Gender in a Globalizing World

## Earth Sciences

EAR 325 - Introduction to Paleobiology

## English and Textual Studies

ETS 113 - Survey of British Literature, Beginnings to 1789

ETS 114 - Survey of British Literature, 1789 to Present

ETS 115 - Topics in British Literary History
ETS 117 - Survey of American Literature, Beginnings to 1865

ETS 118 - Survey of American Literature, 1865 to Present
ETS 119 - Topics in U.S. Literary History
ETS 121 - Introduction to Shakespeare
ETS 122 - Introduction to the Novel
ETS 142 - Narratives of Culture:Introduction to Issues of Critical Reading

ETS 146 - Reading Screen Culture
ETS 151 - Interpretation of Poetry
ETS 152 - Interpretation of Drama
ETS 153 - Interpretation of Fiction
ETS 154 - Interpretation of Film
ETS 155 - Interpretation of Nonfiction
ETS 181 - Class and Literary Texts
ETS 182 - Race and Literary Texts
ETS 184 - Ethnicity and Literary Texts
ETS 192 - Gender and Literary Texts
ETS 235 - Classics of World Literature I
ETS 236 - Classics of World Literature II

## Geography

GEO 155 - The Natural Environment (honors only)
GEO 171 - Human Geographies
GEO 219 - American Diversity and Unity (Honors) (honors only)

GEO 272 - World Cultures
GEO 273 - World Political Economy
GEO 353-Geographies of Environmental Justice
GEO 367 - Gender in a Globalizing World

## History

HST 101 - American History to 1865
HST 102 - American History Since 1865
HST 111 - Early Modern Europe, 1350-1815
HST 112 - Modern Europe: Napoleon to the

Present
HST 201 - Research Seminar in History
HST 210 - The Ancient World
HST 318 - The Middle East to 1900
HST 347 - Modern American Politics Through Fiction
HST 348 - Queering the Middle Ages?
HST 398 - Saints and Sinners in the Middle Ages
HST 399 - Utopia and Institution: Early Monasticism

## International Relations Program

IRP 412 - Global Governance: The United Nations System

## Jewish Studies Program

JSP 235 - Travel Narratives and Pilgrimages
JSP 333 - Yiddish Literature in Translation
Law in the Liberal Arts
LLA 201 - Elements of Law
Lesbian, Gay, Bisexual and Transgender Studies
QSX 348 - Queering the Middle Ages?
QSX 357 - Queerly Religious

## Literature in Translation

LIT 235 - Travel Narratives and Pilgrimages
LIT 333 - Yiddish Literature in Translation

## Maxwell School of Citizenship and Public Affairs

MAX 123 - Critical Issues for the United States . MAX 132 - Global Community

## Middle Eastern Studies

MES 318 - The Middle East to 1900

## Philosophy

PHI 107 - Theories of Knowledge and Reality
PHI 109 - Introduction to Philosophy (Honors)
PHI 111 - Plato's Republic
PHI 172 - Making Decisions
PHI 197 - Human Nature
PHI 241 - The Human and Divine in Christian and Muslim Philosophy
PHI 297 - Philosophy of Feminism
PHI 319 - God in Political Theory

## Political Science

PSC 399 - God in Political Theory
PSC 412 - Global Governance: The United Nations System

## Religion

REL 123 - Religious Auto/Biography
REL 235 - Travel Narratives and Pilgrimages
REL 261 - Faith and Reason in Islamic Thought and Civilization

REL 283 - India's Religious Worlds
REL 292 - The Human and Divine in Christian and Muslim Philosophy

REL 301 - Ancient Near Eastern Religions and Cultures

REL 333 - Yiddish Literature in Translation
REL 357 - Queerly Religious
REL 367 - God and Beauty in Islamic Art
REL 371 - God in Political Theory
REL 385 - Religion in Chinese Society
REL 393 - Extreme Religion

## South Asian Studies

SAS 123 - Religious Auto/Biography
SAS 283 - India's Religious Worlds
SAS 324 - Modern South Asian Cultures

## Spanish

SPA 465 - Literature and Popular Culture

## Women's and Gender Studies

WGS 101 - Introduction to Women's and Gender Studies

WGS 192 - Gender and Literary Texts
WGS 201 - Transnational Feminist Studies
WGS 297 - Philosophy of Feminism
WGS 303 - Black Women Writers
WGS 324 - Modern South Asian Cultures
WGS 328 - Human Diversity in Social Contexts
WGS 367 - Gender in a Globalizing World

## Other Schools and Colleges

David B. Falk College of Sport and Human Dynamics

SWK 328 - Human Diversity in Social Contexts
Only Available For Students in the Renée Crown Honors Program

HNR 240 - Topics in the Humanities Honors Arts Without Borders

HNR 260 - Topics in the Social Sciences Honors American Diversity and Unity

HNR 260 - Topics in the Social Sciences Honors History of the Women's Suffrage Movement
HNR 340 - Topics in the Humanities Honors Good Film, Bad People
HNR 340 - Topics in the Humanities Honors Tell Your Story Walking

HNR 340 - Topics in the Humanities Honors Fiction Writing Workshop
HNR 360 - Topics in the Social Sciences Honors Modern American Politics Through Fiction

## Note:

Transfer and other credit are not accepted for the Writing Intensive Requirement.

These courses may not be used to satisfy the Writing Intensive Requirement if taken prior to Fall 1995.

## Divisional Perspective Requirement

## Humanities Division

The Humanities Division encompasses the history, theory, analysis and criticism of language, literature and other texts, religion, art, and music; and the examination of fundamental questions arising in the human search for values, knowledge, purpose, and meaning. These are central concerns of the departments or programs of African American Studies; English; Languages, Literatures and Linguistics; Art and Music Histories; Philosophy; Religion and Women's Studies. Hence, most courses satisfying the Humanities Division requirements come from these departments and programs.

## The Humanities List

Students must take at least four courses from the following list, including a two-course sequence (indicated by hyphens), to complete the requirement for four courses in this division. No more than three courses may be taken from a single department or program (even if the courses of the department or program are in more than one division).

## African American Studies <br> AAS 138 - Writing About Black Culture <br> AAS 206 - Introduction to African American Music sequences with

AAS 207 - A Survey of African Music

AAS 231 - African American Literature to 1900: An Introduction sequences with

AAS 232 - African American Lliterature: Twentieth and Twenty-First Centuries

AAS 233 - The Caribbean Novel sequences with
AAS 234 - African Fiction
AAS 235 - African American Drama
AAS 241 - African Religions: An Introduction sequences with

AAS 345 - African American Religious History
AAS 302 - Contemporary African American Theater
AAS 303 - Black Women Writers
AAS 304 - Workshop:African American Theater
AAS 305 - African Orature
AAS 331 - The African American Novel: Twentieth and Twenty-First Centuries

AAS 338 - Creative Writing Workshop
AAS 345 - African American Religious History
AAS 361 - Art of the Black World
AAS 403 - African and Caribbean Women Writers
AAS 408 - Masters of American Black Music
AAS 409 - History of Jazz, 1940 to Present
AAS 433 - Harlem Renaissance:Literature and Ideology
AAS 465 - The Image of Blacks in Art and Film
AAS 470 - Experience Credit Internship in African American Studies (when appropriate, by petition)

AAS 490 - Independent Study (when appropriate, by petition)
AAS 540 - Seminar:African American Studies (when appropriate, by petition)

## Anthropology

ANT 185-Global Encounters:Comparing World Views \& Values Cross-Culturally

ANT 202 - Languages of the World
ANT 273 - Indigenous Religions
ANT 326 - Africa Through the Novel
ANT 376 - Folklore
ANT 472 - Language, Culture, and Society

## Art and Music Histories

The following are Art and Music
Histories sequences:
HOA 105 - Arts and Ideas I sequences with
HOA 106 - Arts and Ideas II
HOM 165 - Understanding Music I sequences with

HOM 166 - Understanding Music II
HOM 195 - Performance Live sequences with
Any 300 level or 400 level HOM course
HOM 285 - Introduction to World Music sequences with
one other HOM music course HOM 381 through HOM 389 or HOM 481 through HOM 489

HOM 325 - Music in Latin America sequences with

HOM 326 - Music in the Caribbean
HOM 353 - Worlds of Dance sequences with
Any HOM course in the 350's or 450's
Any two HOA or HOM courses in the 260s, 360s, and 460s - constitute a sequence.

Any two HOA or HOM courses in the 370s and 470s - constitute a sequence.

All HOA and HOM courses count in the Humanities Division.

## Cognitive Science

COG courses may be accepted by petition.

## Communication Sciences and Disorder

CSD 316 - Introduction to Applied Phonetics

## English and Textual Studies

All ETS courses count in the Humanities Division. A sequence can be made up of any two 100 - level ETS courses, any two 200-level ETS courses, or a combination of one 100-level ETS course and one 200-level ETS course, or the combination of ETS 242 and ETS 305.

## History

HST 111 - Early Modern Europe, 1350-1815 sequences with

HST 112 - Modern Europe: Napoleon to the Present

HST 210 - The Ancient World sequences with
HST 211 - Medieval and Renaissance Europe
HST 210 - The Ancient World
HST 211 - Medieval and Renaissance Europe
The following HST courses count in the Humanities Division

HST 310 - The Early Middle Ages
HST 311 - Medieval Civilization
HST 312 - Reformation of the 16th Century
HST 319 - The Middle East in the 20th Century

HST 320 - Traditional China
HST 321 - Modern China
HST 354 - Decline and Fall of the Roman Empire
HST 355 - The Italian Renaissance
HST 357 - Culture and politics in Early Modern England: Henry VIII to Charles I

HST 358 - Revolution and Civil War in 17th Century England

HST 379 - Gender, Race, and Colonialism
HST 417 - History of Women in Spain

## Honors

HNR 240 - Topics in the Humanities Honors HNR 340 - Topics in the Humanities Honors HNR 440 - Topics in the Humanities Honors

## Humanities

## All HUM courses.

## Jewish Studies

JSP courses that are cross listed with humanities courses

## Languages

## Arabic

All ARB courses 202 and above.

## Chinese

All CHI courses 202 and above.

## French and Francophone Studies

FRE 305 - Evolution and Revolution through the Centuries sequences with

FRE 306 - From Romanticism to Postmodernism
FRE 315 - French Civilization sequences with
FRE 316 - Contemporary French Culture
All FRE courses 202 and above

## German

All GER courses 202 and above

## Greek

All GRE courses 202 and above.
Any LAT or GRE course at or above the 300 level (LAT 310, LAT 320, LAT 410, LAT 420; GRE 310, GRE 320, GRE 410, GRE 420) constitute a sequence.

## Hebrew

All HEB courses 202 and above.

## Hindi/Urdu

All HIN courses 202 and above.

## Italian

All ITA courses 202 and above.

## Japanese

All JPS courses 202 and above

## Kiswahili

All SWA courses 202 and above.

## Korean

All KOR courses 202 and above.

## Latin

All LAT courses 202 and above
Any LAT or GRE course at or above the 300 level (LAT 310, LAT 320, LAT 410, LAT 420; GRE 310, GRE 320, GRE 410, GRE 420) constitute a sequence.

## Persian

All PRS courses 202 and above.

## Polish

All POL courses 202 and above

## Portuguese

All POR courses 202 and above.

## Russian

RUS 331 - Russian Culture Through Fiction and Film sequences with

LIT 226 - Dostoevsky and Tolstoy
RUS 331 - Russian Culture Through Fiction and Film sequences with

LIT 227 - Pasternak and Solzhenitsyn
All RUS courses 202 and above.

## Spanish

SPA 301 - Approaches to Reading Texts sequences with

## SPA 321 - Introduction to Spanish Literature

SPA 301 - Approaches to Reading Texts sequences with

SPA 322 - Introduction to Latin American Literature

SPA 321 - Introduction to Spanish Literature sequences with

SPA 322 - Introduction to Latin American

Literature
All SPA courses 202 and above.

## Turkish

All TRK courses 202 and above.
Latino-Latin American Studies
LAS 302 - Introduction to Latin American Literature

LAS 326 - Beyond the Screen: Latin American and Spanish Film

LAS 402 - Hispanic Journalistic Practices
LAS 425 - Post-colonialism and Philosophy
LAS 433 - Business Spanish
LAS 461 - Nobel Prize Writers of the SpanishSpeaking World
LAS 463 - Contemporary Latin American Theater
LAS 465 - Literature and Popular Culture
LAS 467 - Film and Literature
LAS 471 - Contemporary Latin American Literature
LAS 475 - Women, Myth and Nation in Latin American Literature

LAS 479 - Perspectives on Mexico and Central America: Literature, Art, Film

LAS 481 - The Literature of Latinos in the United States

LAS 489 - Hispanic Caribbean Narrative and Film
LAS 493 - Afro-Hispanic Topics in Caribbean Literature

LAS 495 - Marginal Cultures in Hispanic Caribbean Literature

LAS 497 - Text and Context in Cuban Revolutionary Literature

## Lesbian, Gay, Bisexual and Transgender Studies

QSX 112 - Sexualities, Genders, Bodies
QSX 357 - Queerly Religious

## Linguistics

All LIN courses
LIN 201 - The Nature and Study of Language sequences with

LIN 202 - Languages of the World
LIN 201 - The Nature and Study of Language sequences with

LIN 251 - English Words
Literature in Translation

LIT 101 - Introduction to Classical Literature sequences with

LIT 102 - Introduction to Classical Literature
LIT 101 - Introduction to Classical
Literature sequences with
LIT 203 - Greek and Roman Epic in English Translation

LIT 101 - Introduction to Classical Literature sequences with
LIT 211 - Greek and Roman Drama in English Translation

LIT 102 - Introduction to Classical Literature sequences with
LIT 203 - Greek and Roman Epic in English Translation

LIT 102 - Introduction to Classical Literature sequences with

LIT 211 - Greek and Roman Drama in English Translation

LIT 203 - Greek and Roman Epic in English Translation sequences with

LIT 211 - Greek and Roman Drama in English Translation
LIT 226 - Dostoevsky and Tolstoy sequences with
LIT 227 - Pasternak and Solzhenitsyn
LIT 226 - Dostoevsky and Tolstoy sequences with
LIT 331 - Russian Culture Through Fiction and Film
LIT 227 - Pasternak and Solzhenitsyn sequences with

LIT 331 - Russian Culture Through Fiction and Film
LIT 241 - Dante and the Medieval World sequences with

LIT 242 - Petrarch and the Renaissance World

## Middle Eastern Studies

MES 165 - Discovering Islam
MES 319 - The Middle East in the 20th Century
MES 336 - Arabic Cultures
MES 365 - God and Beauty in Islamic Art
MES 465 - Beyond the Veil: Gender Politics in Islam

## Native American Studies

NAT 142 - Native American Religion
NAT 208 - Haudenosaunee Languages and Culture
NAT 244 - Indigenous Religions
NAT 346 - Native North American Art
NAT 347 - Religion and the Conquest of America

NAT 348 - Religion and American Consumerism

## Philosophy

All PHI courses.
A sequence can be made up of any two 100 -level PHI courses, any two 200 -level PHI courses, or a combination of one 100 -level PHI and one 200-level PHI courses with the following exception: the combination of PHI 171 and PHI 172 does not constitute a sequence.

## Religion

All REL courses.
A sequence can be made up of any REL course with any REL course at the 200-level or above.

## South Asian Studies

SAS 123 - Religious Auto/Biography
SAS 165 - Discovering Islam
SAS 185 - Hinduism
SAS 186 - Buddhism
SAS 283 - India's Religious Worlds
SAS 367 - God and Beauty in Islamic Art
SAS 384 - Goddesses, Women and Power in Hinduism

SAS 465 - Beyond the Veil: Gender Politics in Islam

## Women's and Gender Studies

WGS 101 - Introduction to Women's and Gender Studies sequences with

WGS 297 - Philosophy of Feminism
WGS 101 Introduction to Women's and Gender Studies sequences with
WGS 301 - Feminist Theories
WGS 101 Introduction to Women's and Gender Studies sequences with
WGS 343 - Latina Feminist Theories
WGS 101 Introduction to Women's and Gender Studies sequences with
WGS 365 - Negotiating Difference:Coming of Age Narratives

All WGS courses cross-listed with ETS, HOA, HOM, LIT, PHI, \& REL

In addition to the following:
WGS 301 - Feminist Theories
WGS 303 - Black Women Writers
WGS 310 - Feminist Inquiries (when appropriate, by petition)

WGS 327 - Africa Through the Novel WGS 343 - Latina Feminist Theories
WGS 365 - Negotiating Difference:Coming of Age Narratives
WGS 379 - Gender, Race, and Colonialism
WGS 384 - Goddesses, Women and Power in Hinduism

WGS 400 - Selected Topics (when appropriate, by petition)

WGS 403 - African and Caribbean Women Writers
WGS 410 - Advanced Studies in Feminist Thought (when appropriate, by petition)
WGS 417 - History of Women in Spain
WGS 465 - Beyond the Veil: Gender Politics in Islam
WGS 472 - Language, Culture, and Society
WGS 475 - Women, Myth and Nation in Latin American Literature
WGS 490 - Independent Study (when appropriate, by petition)

## Writing Program

WRT 114 - Writing Culture
WRT 255 - Advanced Argumentative Writing
WRT 413 - Rhetoric and Ethics
WRT 422 - Studies in Creative Nonfiction
WRT 423 - African American Rhetoric
WRT 424 - Studies in Writing, Rhetoric, Identity
WRT 428 - Studies in Composition, Rhetoric and Literacy

## Interdepartmental Sequences in the Humanities

LIN 201 - The Nature and Study of Language sequences with
PHI 251 - Logic
ANT 185 - Global Encounters:Comparing World Views \& Values Cross-Culturally sequences with
WGS 101 - Introduction to Women's and Gender Studies

## Natural Sciences and Mathematics Division

The Natural Sciences and Mathematics Division encompasses the investigation of natural phenomena, including the development of predictive explanatory systems, and includes the study of numerical and other abstract structures and relations. These are central concerns of the departments of Biology, Chemistry, Earth Sciences (Geology), Physics, and Mathematics. Hence
most courses satisfying the Natural Sciences and Mathematics Division requirements come from these departments.

## The Natural Sciences and Mathematics List

Students must take at least four courses from this list, including a 2 -course sequence (indicated by hyphens) and a course with a laboratory (indicated by course numbers in bold print) to complete the requirement for four courses in this division. No more than three courses may be taken from a single department or program (even if the courses of the department or program are in more than one division).

## Anthropology

ANT 131 - Introduction to Biological Anthropology sequences with
ANT 433 - Human Osteology

## Astronomy

AST 101 - Our Corner of the Universe
AST 104 - Stars,Galaxies \& Universe
All AST courses.
A sequence can be made up of any two 100-level PHY or AST courses, any two 200-level PHY courses, or a combination of one 100-level PHY or AST and one 200-level PHY course.

## Biology

BIO 121 - General Biology I sequences with
BIO 123 - General Biology II
BIO 124 - General Biology II Laboratory
All BIO courses.

## Chemistry

CHE 103 - Chemistry in the Modern World sequences with

CHE 113 - Forensic Science
CHE 106-General Chemistry Lecture I and
CHE 107-General Chemistry Laboratory I sequences with
CHE 116 - General Chemistry Lecture II and
CHE 117 - General Chemistry Laboratory II
CHE 109-General Chemistry Lecture I (Honors and Majors) and
CHE 129 - General Chemistry Laboratory I
(Honors and Majors) sequences with
CHE 119 - General Chemistry Lecture II (Honors and Majors) and
CHE 139 - General Chemistry Laboratory II
(Honors and Majors)
Credit is given for CHE 106/116 or, CHE 109/119 but not for both. Note: this is the same for the lab CHE 107-CHE 117 or CHE 129-CHE 139.

Credit is given for CHE 105, or CHE 106, or CHE 109, but not more than one of these. This is the same for the lab CHE 151, CHE 107, or CHE 129.

All CHE courses.

## Cognitive Science

COG courses may be accepted by petition.

## Communication Sciences and Disorders

CSD 212 - Introduction to Communication Sciences and Disorders sequences with
CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms
CSD 212 - Introduction to Communication Sciences and Disorders sequences with

CSD 325 - Fundamentals of Hearing Sciences
CSD 345 - Speech Science
CSD 409-Cognitive Neuroscience of Speech and Language

## Earth Sciences

## First Course in the Sequence:

EAR 110 - Dynamic Earth or
EAR 105 - Earth Science or
EAR 203 - Earth System Science

## Second Course in the Sequence:

EAR 210 - History of Earth and Life
EAR 106 - Geohazards \& Natural Disasters
EAR 111 - Climate Change Past and Present
EAR 117-Oceanography
EAR 200 - Selected Topics
EAR 205 - Water and Our Environment
EAR 225 - Volcanoes and Earthquakes

## Notes:

Prospective Earth Science majors are strongly encouraged to take the EAR 110 - EAR 210 sequence.
Courses can be taken in any order except EAR 210 which requires a prerequisite of either EAR 110 or EAR 203 or both EAR 105 and EAR 104.

ANY EAR course will count toward the divisional
requirement of four courses in the natural sciences and mathematics. Credit is given for EAR 110 (formerly EAR 101) or EAR 105, but not for both.

## Geography

GEO 155 - The Natural Environment sequences with

GEO 215 - Global Environmental Change
GEO 155 - The Natural Environment sequences with

GEO 316 - River Environments
GEO 155 - The Natural Environment sequences with

GEO 326 - The Geography of Climate and Weather
The following GEO courses count in the Natural Science and Mathematics Division

GEO 482 - Environmental Remote Sensing
GEO 455 - Biogeography
GEO 583 - Environmental Geographical Information Science

## Honors

HNR 250 - Topics in the Natural Sciences and Mathematics Honors
HNR 350 - Topics in the Natural Sciences and Mathematics Honors

HNR 450 - Topics in the Natural Sciences and Mathematics Honors

HNR 255 - Topics in the Sciences with Laboratory Component
HNR 355 - Topics in the Sciences with Laboratory Component

HNR 455 - Topics in the Sciences with Laboratory Component

## Mathematics

MAT 285 - Life Sciences Calculus I sequences with

MAT 286 - Life Sciences Calculus II
MAT 295 - Calculus I sequences with
MAT 296 - Calculus II
All MAT courses above 230. (MAT 284 cannot be used simultaneously to meet the divisional perspective requirement and to meet the Quantitative Skills Requirement.)

## Physics

PHY 101 - Major Concepts of Physics I
PHY 102 - Major Concepts of Physics II
PHY 211 - General Physics I or

PHY 215 - General Physics I (Honors and Majors)
PHY 221 - General Physics Laboratory I
PHY 212 - General Physics II or
PHY 216 - General Physics II (Honors \& Majors)
PHY 222 - General Physics Laboratory II
All PHY courses.
A sequence can be made up of any two 100 -level PHY or AST courses, any two 200-level PHY courses, or a combination of one 100-level PHY or AST and one 200-level PHY course.

## Psychology

PSY 223 - Introduction to Cognitive Neuroscience
PSY 323 - Brain and Behavior
PSY 324 - Developmental Biopsychology
PSY 334 - Laboratory in Developmental
Biopsychology

## Science Teaching

All SCl courses.

## Science, Technology, and Society <br> STS course may be accepted by petition.

## Other Schools and Colleges

*Apply as Non-Arts \& Sciences credit

## College of Human Ecology

NSD 225 - Nutrition in Health *

## Social Sciences Division

The Social Sciences Division encompasses the history, theory, and investigation of societies, systems, regions, groups and individuals. These are central concerns of the departments of African American Studies, Anthropology, Economics, Geography, History, Political Science, Public Affairs, Psychology, Sociology, International Relations and Women's Studies. Hence most courses satisfying the Social Sciences Division requirements come from these departments.

## The Social Sciences List

Students must take at least four courses from the following list, including a 2 -course sequence (indicated by hyphens) to complete the requirement for four courses in this division. No more than three courses may be taken from a single department or program (even if the courses of the department or program are in more than one division).

## African American Studies

AAS 112 - Introduction to African American Studies in Social Sciences sequences with

AAS 202 - Caribbean Society Since Independence
AAS 112 - Introduction to African American Studies in Social Sciences sequences with

AAS 254 - Comparative Study of American Ethnic Communities

AAS 306 - African American Politics sequences with

AAS 341 - Politics of Africa
The following courses count in the Social Sciences Division:

AAS 312 - Pan Africanism
AAS 332 - African American History: Through the 19th Century
AAS 333 - African American History: After the 19th Century

AAS 341 Politics of Africa
AAS 353 - Sociology of the African American Experience

AAS 402 - Slavery and Abolition
AAS 410 - Seminar on Social Change
AAS 470 - Experience Credit (when appropriate, by petition)

AAS 490 - Independent Study (when appropriate, by petition)

AAS 501 - African American Sociological Practice:1900-45
AAS 512 - African American Women's History
AAS 525 - Research Methods in African American Studies

AAS 540 - Seminar:African American Studies (when appropriate, by petition)

## Anthropology

ANT 111 - Introduction to Cultural Anthropology
together with any ANT 200 level or above course, constitutes a sequence except ANT 202, ANT 273, ANT 326, ANT 376, and ANT 433.

ANT 121 - Peoples and Cultures of the World together with any ANT 200 level or above course, constitutes a sequence except ANT 202, ANT 273, ANT 326, ANT 376, and ANT 433.

ANT 141 - Introduction to Archaeology and Prehistory sequences with

ANT 145 - Introduction to Historical Archaeology
All ANT courses count in the Social Science Division except ANT 131, ANT 185, ANT 202, ANT 273, ANT 326, ANT 376, ANT 433, and ANT 472.

## Cognitive Science

COG courses may be accepted by petition.

## Communication, Sciences \& Disorders

CSD 303 - Communication in the Classroom
CSD 422 - Development of Speech and Language
CSD 427 - Articulation Disorders

## Economics

ECN 101 - Introductory Microeconomics sequences with

ECN 102 - Introductory Macroeconomics
ECN 203 - Economic Ideas and Issues sequences with

ECN 301 - Intermediate Microeconomics
ECN 203 - Economic Ideas and Issues sequences with

ECN 302 - Intermediate Macroeconomics
ECN 203 - Economic Ideas and Issues sequences with

ECN 304 - The Economics of Social Issues
ECN 203 - Economic Ideas and Issues sequences with

ECN 311 - Intermediate Mathematical Microeconomics

All ECN courses count in the Social Sciences Division.

## Geography

GEO 103 - Environment and Society sequences with

GEO 203 - Society and the Politics of Nature
GEO 103 - Environment and Society sequences with

GEO 317 - Geography of Mountain Environments
GEO 103 - Environment and Society sequences with

GEO 353 - Geographies of Environmental Justice
GEO 103 - Environment and Society sequences with

GEO 354 - American Environmental History and Geography
GEO 103 - Environment and Society sequences with

GEO 356 - Environmental Ideas and Policy
GEO 105 - World Urban Geography sequences with

GEO 273 - World Political Economy

GEO 171 - Human Geographies sequences with GEO 272 - World Cultures

GEO 171 - Human Geographies sequences with
GEO 273 - World Political Economy
GEO 272 - World Cultures sequences with
GEO 273 - World Political Economy
All GEO courses count in the Social Sciences Division except GEO 155, GEO 215, GEO 316, GEO 326, GEO 482, GEO 455, GEO 583.

## History

HST 101 - American History to 1865 sequences with

HST 102 - American History Since 1865
HST 121 - Global History to 1750 sequences with
HST 122 - Global History 1750 to Present
All HST courses count in the Social Sciences
Division except HST 111, HST 112, HST 210 , HST 211, HST 310, HST 311, HST 312, HST
319 , HST 320, HST 321, HST 354, HST 355, HST 357, HST 358, HST 379, HST 417

## Honors

HNR 260 - Topics in the Social Sciences Honors HNR 360 - Topics in the Social Sciences Honors HNR 460 - Topics in the Social Sciences Honors

## International Relations

All IRP courses

## Jewish Studies

JSP 362 - Nazi Germany and the Holocaust
Latino-Latin American Studies
LAS 313 - Modern Latin America
LAS 318 - South American Cultures
LAS 321 - Latin American Development: Spatial Aspects
LAS 322 - Colonial Latin America
LAS 324 - Recent Latin American History
LAS 333 - Politics of Latin America
LAS 358 - Latin American International Relations
LAS 371 - Gender in Latin American History
LAS 372 - Race in Latin America

## Law in the Liberal Arts

LLA 201 - Elements of Law

## Lesbian, Gay, Bisexual, Transgender Studies

QSX 111 - Queer Histories, Communities, and Politics

QSX 348 - Queering the Middle Ages?

## Maxwell

MAX 123 - Critical Issues for the United States
MAX 132 - Global Community
These courses constitute a sequence and may be taken in any order.

All MAX courses except MAX 201.

## Middle Eastern Studies

MES 318 - The Middle East to 1900 sequences with

MES 344 - Politics of the Middle East
MES 345 - Islam and Politics in Asia
MES 349 - Politics of Iran
MES 366 - Representations of the Middle East
MES 367 - Oil, Water and War
MES 368 - Islam and the West
MES 382 - Health in the Middle East
MES 391 - Revolutions in the Middle East
MES 392 - Islamism and Islamist Movements Today

MES 393 - Middle Eastern Political Systems
MES 394 - History of Islamic Political Thought
MES 395 - Democratization in the Muslim World
MES 468 - Middle East in Anthropological Perspective

## Native American Studies

NAT 105 - Introduction to Native American Studies
NAT 323 - Peoples and Cultures of North America
NAT 372 - Race in Latin America
NAT 441 - Federal Indian Policy and Native American Identity

NAT 444 - Contemporary Native American Movements

NAT 445 - Public Policy and Archaeology
NAT 447 - Archaeology of North America
NAT 456 - Representations of Indigenous Peoples in Popular Culture

NAT 459 - Contemporary Native North American Issues

NAT 461 - Museums and Native Americans

## Public Affairs

All PAF courses.

## Political Science

PSC 306 - African American Politics sequences with

PSC 341 - Politics of Africa
PSC 308 - The Politics of U.S. Public Policy sequences with

PSC 309 - Interest Group Politics
PSC 324 - Constitutional Law I sequences with
PSC 325 - Constitutional Law II
PSC 352 - International Law sequences with
PSC 353 - International Organization

## American National Government and Politics

PSC 121 - American National Government and Politics or PSC 129 - American National Government and Politics (Honors), together with any of the following courses, constitutes a sequence:

PSC 302 - Environmental Politics and Policy
PSC 303 - The Development of the American State
PSC 304 - The Judicial Process
PSC 305 - U.S. Congressional Politics
PSC 306 - African American Politics
PSC 308 - The Politics of U.S. Public Policy
PSC 309 - Interest Group Politics
PSC 311 - American Political Parties
PSC 313 - Campaign Analysis
PSC 314 - Public Opinion and Electoral Behavior
PSC 315 - Politics and Media
PSC 316 - The Supreme Court in American Politics
PSC 323 - Politics of the Executive Branch
PSC 324 - Constitutional Law I
PSC 329 - The Modern American Presidency
PSC 369 - Global Migration
PSC 374 - Law and Society

## Comparative Government and Politics

PSC 123 - Comparative Government and Politics, together with any of the following courses, constitutes a sequence:

PSC 331 - Canadian Politics
PSC 333 - Politics of Latin America
PSC 334 - Mexico and the United States
PSC 335 - Politics of East Asia

PSC 341 - Politics of Africa
PSC 343 - Politics of Europe
PSC 344 - Politics of the Middle East
PSC 346 - Comparative Third World Politics
PSC 347 - Politics of Russia
PSC 348 - Politics and the Military
PSC 349 - Politics of Iran
PSC 356 - Political Conflict
PSC 366 - Representations of the Middle East
PSC 369 - Global Migration
PSC 387 - Ethnic Conflict
PSC 388 - Politics of Globalization
PSC 389 - Politics of India
PSC 391 - Revolutions in the Middle East
PSC 392 - Islamism and Islamist Movements Today

PSC 393 - Middle Eastern Political Systems
PSC 394 - History of Islamic Political Thought
PSC 395 - Democratization in the Muslim World

## International Relations

PSC 124 - International Relations or PSC 139 International Relations (Honors), together with any of the following courses, constitutes a sequence:
PSC 342 - Religion and Politics in the IsraeliPalestinian Conflict

PSC 348 - Politics and the Military
PSC 350 - Problems in International Relations
PSC 352 - International Law
PSC 353 - International Organization
PSC 354 - Human Rights and Global Affairs
PSC 355 - International Political Economy
PSC 356 - Political Conflict
PSC 357 - U.S. Foreign Policy
PSC 359 - Foreign Policymaking
PSC 363 - Ethics and International Relations
PSC 364 - African International Relations
PSC 365 - International Political Economy of the Third World

PSC 367 - Oil, Water and War
PSC 369 - Global Migration
PSC 388 - Politics of Globalization
PSC 396 - European Integration
PSC 397 - Realism and Power Politics in International Relations

PSC 398 - How the United States Became a Great Power

## Political Theory

PSC 125 - Political Theory, together with any of the following courses, constitutes a sequence:

PSC 307 - The Politics of Citizenship
PSC 371 - Democratic Theory and Politics
PSC 373 - Political Philosophy: The Social
Contract Tradition and its Critics
PSC 375 - Philosophy of Law
PSC 378 - Power and Identity
PSC 382 - Contemporary Political Philosophy
PSC 385 - Rationality and Politics
All PSC courses count in the Social Sciences Division

## Psychology

All PSY courses except, PSY 252, PSY 323, PSY 324, PSY 334

PSY 205 - Foundations of Human Behavior or PSY 209 - Foundations of Human Behavior/ Honors Section and either PSY 274 or PSY 335 or PSY 336 or PSY 337 constitute a sequence.

## Sociology

SOC 101 - Introduction to Sociology sequences with

## SOC 102-Social Problems

SOC 101 - Introduction to Sociology sequences with

SOC 248 - Ethnic Inequalities and Intergroup Relations

SOC 101 - Introduction to Sociology sequences with

SOC 281 - Sociology of Families
All SOC courses count in the Social Sciences Division.

## Social Science

All SOS courses count in the Social Sciences Division.

## South Asian Studies

SAS 324 - Modern South Asian Cultures
SAS 328 - Ancient and Medieval India
SAS 329 - Making of Modern India
SAS 375 - British Empire

## Women's and Gender Studies

WGS 201 - Transnational Feminist Studies sequences with the following courses:

WGS 425 - Feminist Organizations

WGS 438 - Trans Genders and Sexualities
WGS 439 - Women, Gender and Violence in a Transnational Context

WGS 452 - Feminism and Postcolonial Studies
WGS 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies
All WGS courses cross-listed with ANT, ECN, GEO, HST, PSC, PSY, \& SOC in addition to the following:
WGS 201 Transnational Feminist Studies
WGS 310 - Feminist Inquiries (when appropriate, by petition)

WGS 326 - Persons in Social Context
WGS 328 - Human Diversity in Social Contexts
WGS 362 - Youth, Schooling and Popular Culture
WGS 400 - Selected Topics (when appropriate, by petition)

WGS 410 - Advanced Studies in Feminist Thought (when appropriate, by petition)
WGS 414 - Communication \& Gender
WGS 438 Trans Genders and Sexualities
WGS 439 Women, Gender and Violence in a Transnational Context

WGS 444 - Schooling \& Diversity
WGS 452 Feminism and Postcolonial Studies
WGS 453 Feminisms, Sexualities, and Human Rights in Middle Eastern Societies

WGS 490 - Independent Study (when appropriate, by petition)

## Other Schools and Colleges

*Apply as Non-Arts \& Sciences credit

## School of Education

EDU 203 - Introduction to Inclusive Schooling *
DSP 203 - Introduction to Inclusive Schooling
PPE 435 - Introduction to Sports Psychology *
SPE 311 - Perspectives on Disabilities *

## Martin J. Whitman School of Management <br> LPP 255 - Introduction to the Legal System *

## David B. Falk College of Sport and Human Dynamics

SWK 314 - Social Welfare Policy and Services I *
SWK 315 - Social Welfare Policy and Services II *
SWK 326 - Persons in Social Context
SWK 328 - Human Diversity in Social Contexts

## SUNY College of Environmental Science and Forestry

EST 390 - Social Processes and the Environment

## Interdepartmental Sequences in the Social Sciences

In addition to the departmental sequences indicated on previous pages, the following interdepartmental sequences may also be used to fulfill the requirement for a sequence in the Social Sciences.

AAS 112 - Introduction to African American
Studies in Social Sciences sequences with
AAS 202 - Caribbean Society Since Independence
AAS 112 - Introduction to African American
Studies in Social Sciences sequences with
AAS 254 - Comparative Study of American Ethnic Communities

ANT 111 - Introduction to Cultural Anthropology sequences with

MAX 123 - Critical Issues for the United States
ANT 111 - Introduction to Cultural Anthropology sequences with

MAX 132 - Global Community
ANT 111 - Introduction to Cultural Anthropology sequences with

WGS 201 - Transnational Feminist Studies
ANT 121 - Peoples and Cultures of the World sequences with

GEO 272 - World Cultures
ANT 121 - Peoples and Cultures of the World sequences with

MAX 123 - Critical Issues for the United States
ANT 121 - Peoples and Cultures of the World sequences with

MAX 132 - Global Community
ANT 121 - Peoples and Cultures of the World sequences with

WGS 201 - Transnational Feminist Studies
ANT 141 - Introduction to Archaeology and Prehistory sequences with

ANT 145 - Introduction to Historical Archaeology
ECN 101 - Introductory Microeconomics sequences with

MAX 123 - Critical Issues for the United States
ECN 203 - Economic Ideas and Issues sequences with

MAX 123 - Critical Issues for the United States
ECN 203 - Economic Ideas and Issues sequences
with
MAX 132 - Global Community
GEO 171 - Human Geographies sequences with
MAX 132 - Global Community
GEO 272 - World Cultures sequences with
MAX 132 - Global Community
GEO 273 - World Political Economy sequences with

MAX 132 - Global Community
HST 101 - American History to 1865 sequences with

MAX 123 - Critical Issues for the United States
HST 102 - American History Since 1865 sequences with
MAX 123 - Critical Issues for the United States
HST 318 - The Middle East to 1900 sequences with
MES 344 - Politics of the Middle East
MES 318 - The Middle East to 1900 sequences with

MES 344 - Politics of the Middle East
PAF 101 - An Introduction to the Analysis of Public Policy sequences with
ECN 258 - Poverty and Discrimination in America
PAF 101 - An Introduction to the Analysis of Public Policy sequences with
GEO 203 - Society and the Politics of Nature
PAF 101 - An Introduction to the Analysis of Public Policy sequences with

MAX 123 - Critical Issues for the United States
PAF 101 - An Introduction to the Analysis of Public Policy sequences with
PSC 121 - American National Government and Politics or

PSC 129 - American National Government and Politics (Honors)
PAF 101 - An Introduction to the Analysis of Public Policy sequences with

ECN 203 - Economic Ideas and Issues
PAF 101 - An Introduction to the Analysis of Public Policy sequences with

HST 102 - American History Since 1865
PSC 121 - American National Government and Politics or
PSC 129 - American National Government and Politics (Honors) sequences with
HST 101 - American History to 1865
PSC 121 - American National Government and

Politics or
PSC 129 - American National Government and Politics (Honors) sequences with

HST 102 - American History Since 1865
PSC 121 - American National Government and Politics or

PSC 129 - American National Government and Politics (Honors) sequences with

MAX 123 - Critical Issues for the United States .
PSC 123 - Comparative Government and Politics sequences with

ANT 121 - Peoples and Cultures of the World
PSC 123 - Comparative Government and Politics sequences with

GEO 105 - World Urban Geography
PSC 123 - Comparative Government and
Politics sequences with
GEO 272 - World Cultures
PSC 123 - Comparative Government and
Politics sequences with
HST 316 - Europe Since 1945
PSC 123 - Comparative Government and
Politics sequences with
MAX 132 - Global Community
PSC 124 - International Relations or
PSC 139 - International Relations (Honors) sequences with
ANT 121 - Peoples and Cultures of the World
PSC 124 - International Relations or
PSC 139 - International Relations (Honors) sequences with
GEO 272 - World Cultures
PSC 124 - International Relations or
PSC 139 - International Relations
(Honors) sequences with
GEO 273 - World Political Economy
PSC 124 - International Relations or
PSC 139 - International Relations
(Honors) sequences with
MAX 132 - Global Community
PSC 124 - International Relations or
PSC 139 - International Relations
(Honors) sequences with
WGS 201 - Transnational Feminist Studies
PSC 125 - Political Theory sequences with
ECN 203 - Economic Ideas and Issues
PSC 129 - American National Government and Politics (Honors) sequences with

GEO 219 - American Diversity and Unity (Honors)
PSC 344 - Politics of the Middle East sequences with
HST 318 - The Middle East to 1900
SOC 101 - Introduction to Sociology sequences with

AAS 112 - Introduction to African American Studies in Social Sciences
SOC 101 - Introduction to Sociology sequences with

SOC 254 - Comparative Study of American Ethnic Communities

SOC 101 - Introduction to Sociology sequences with
MAX 123 - Critical Issues for the United States
SOC 101 - Introduction to Sociology sequences with
MAX 132 - Global Community

## Honors

Course Sequences that meet the Divisional Perspectives Requirement
(available to students in the Honors Program only)
Any two 3-credit HNR prefix courses from the same division, for example:
Any 2-course combination of HNR 240, HNR 340, or HNR 440 including either taken twice

Any 2-course combination of HNR 260, HNR 360, or HNR 460 including either taken twice

Any 2-course combination of HNR 250 or HNR 255 , HNR 350 or HNR 355, HNR 450 or HNR 455 , including either taken twice

## Critical Reflections on Ethical and Social Issues Requirement

Students are required to take two courses from the approved list that follows. These courses are designed to encourage students to think critically about social and ethical issues that are relevant to contemporary life. They are from a variety of departments and programs and will demonstrate the relevance of study in the liberal arts to gaining critical perspectives on aspects of contemporary society. Many of these courses may simultaneously be used to partially satisfy other Liberal Arts Core requirements.
Most of the courses that satisfy the Critical Reflections on Ethical and Social Issues Requirement promote the University's core value of diversity. They help students to reflect on the diversity of peoples, social groups and cultures that surround them in contemporary life. Many other courses in the Liberal Arts Curriculum outside those on the list of Critical Reflections courses also serve this goal.

## Courses for the Critical Reflections Requirement

Transfer and other credit are not accepted for the Critical Reflections Requirement except when they are included in an Associate Degree as defined in articulation agreements.

These courses that fulfill the Critical Reflections requirement must be successfully completed by the student in the academic year in which they are listed in the Liberal Arts Core Guidebook.

## African American Studies

AAS 112 - Introduction to African American Studies in Social Sciences

AAS 202 - Caribbean Society Since Independence
AAS 231 - African American Literature to 1900: An Introduction

AAS 232 - African American Literature: Twentieth and Twenty-First Centuries

AAS 233 - The Caribbean Novel
AAS 234 - African Fiction
AAS 235 - African American Drama
AAS 254 - Comparative Study of American Ethnic Communities

AAS 303 - Black Women Writers
AAS 305 - African Orature
AAS 306 - African American Politics
AAS 312 - Pan Africanism
AAS 331 - The African American Novel: Twentieth and Twenty-First Centuries
AAS 333 - African American History: After the 19th Century

AAS 338 - Creative Writing Workshop
AAS 341 - Politics of Africa
AAS 353-Sociology of the African American Experience

AAS 403 - African and Caribbean Women Writers
AAS 410-Seminar on Social Change
AAS 433 - Harlem Renaissance:Literature and Ideology

AAS 501 - African American Sociological Practice:1900-45

## Anthropology

ANT 112 - Introduction to African American Studies in Social Sciences

ANT 185 - Global Encounters:Comparing World Views \& Values Cross-Culturally
ANT 221 - Morality and Community
ANT 326 - Africa Through the Novel

ANT 367 - Gender in a Globalizing World
ANT 426 - Cultures and Politics of Afghanistan and Pakistan

ANT 431 - Human Variation
ANT 455 - Culture and AIDS
ANT 477 - Culture and Conflict

## Art and Music Histories

HOA 176 - The Visual Arts of the Americas HOA 360 - Art and Identity

HOM 372 - Music in Multicultural America
HOA 377 - Nineteenth-Century American Art
HOA 378 - Twentieth-Century American Art
HOM 419 - Music and Media
HOM 453 - Dance in American Culture
HOM 473 - Women, Rap and Hip-Hop Feminism
HOM 482 - The Roots of Global Pop
HOM 485 - Contemporary Indigenous Soundscapes

HOM 494 - Music and Gender
Biology
BIO 396 - Stem Cells and Society

## Earth Sciences

EAR 106 - Geohazards \& Natural Disasters
EAR 111 - Climate Change Past and Present
EAR 205 - Water and Our Environment

## Economics

ECN 258 - Poverty and Discrimination in America
ECN 304 - The Economics of Social Issues
ECN 325 - Economics and Gender
English and Textual Studies
ETS 145 - Reading Popular Culture
ETS 181 - Class and Literary Texts
ETS 182 - Race and Literary Texts
ETS 184 - Ethnicity and Literary Texts
ETS 192 - Gender and Literary Texts
French and Francophone Studies
FRE 407 - French Libertine Fictions
FRE 409 - French Culture and Revolution
FRE 412 - French Women Writers
FRE 417 - "Impressions d'Afrique":Caribbean Gazes

FRE 421 - Francophone African Criticism

Geography
GEO 171 - Human Geographies
GEO 272 - World Cultures
GEO 273 - World Political Economy
GEO 353 - Geographies of Environmental Justice
GEO 363 - Cities of North America
GEO 367 - Gender in a Globalizing World
GEO 372 - Political Geography
GEO 440 - Race and Space
GEO 563 - The Urban Condition
GEO 606 - Development and Sustainability

## History

HST 319 - The Middle East in the 20th Century
HST 333 - African American History: After the 19th Century
HST 341 - The Modern American Presidency
HST 342 - Modern American Political Thought
HST 347 - Modern American Politics Through Fiction

HST 348 - Queering the Middle Ages?
HST 349 - Women in America: Civil War to Present
HST 362 - Nazi Germany and the Holocaust
HST 371 - Gender in Latin American History
HST 372 - Race in Latin America
HST 379 - Gender, Race, and Colonialism
HST 383 - Foundations of American Political Thought
HST 389 - LGBT History

## International Relations

IRP 412 - Global Governance: The United Nations System

IRP 426 - Cultures and Politics of Afghanistan and Pakistan

Italian
ITA 434 - Africa in Italian Literature

## Jewish Studies Program

JSP 337 - Shoah: Responding to the Holocaust

## Latino-Latin American Studies Program <br> LAS 335 - Mexico and the United States <br> LAS 343 - Latina Feminist Theories <br> LAS 371 - Gender in Latin American History <br> LAS 372 - Race in Latin America

LAS 463 - Contemporary Latin American Theater
LAS 475 - Women, Myth and Nation in Latin American Literature

LAS 481 - The Literature of Latinos in the United States

## Law in the Liberal Arts

LLA 201 - Elements of Law
Lesbian, Gay, Bisexual, Transgender
Studies
QSX 111 - Queer Histories, Communities, and Politics

QSX 112 - Sexualities, Genders, Bodies
QSX 348 - Queering the Middle Ages?
QSX 357 - Queerly Religious
QSX 384 - Sexuality and the Law
QSX 389 - LGBT History
QSX 456 - LGBT Studies in Sociology

## Linguistics

LIN 201 - The Nature and Study of Language

## Literature in Translation

LIT 331 - Russian Culture Through Fiction and Film
LIT 343 - Latina Feminist Theories

## Maxwell School of Citizenship and Public Affairs

MAX 123 - Critical Issues for the United States .
MAX 132 - Global Community

## Middle Eastern Studies

MES 319 - The Middle East in the 20th Century
MES 366 - Representations of the Middle East

## Native American Studies

NAT 142 - Native American Religion
NAT 347 - Religion and the Conquest of America
NAT 348 - Religion and American Consumerism
NAT 372 - Race in Latin America

## Philosophy

PHI 171 - Critical Thinking
PHI 172 - Making Decisions
PHI 191 - Ethics and Contemporary Issues
PHI 192 - Introduction to Moral Theory
PHI 209 - Introduction to Moral Philosophy (Honors)

PHI 241 - The Human and Divine in Christian and Muslim Philosophy

PHI 297 - Philosophy of Feminism
PHI 342 - Sources of the Self: Finding the "I" in Religion \& Philosophy
PHI 343 - Philosophy of Education
PHI 363 - Ethics and International Relations
PHI 394 - Environmental Ethics
PHI 396 - Stem Cells and Society
PHI 406 - Citizenship from Modernity to Globalization

PHI 411 - Philosophies of Race and Identity
PHI 413 - Identity and Difference
PHI 493 - Contemporary Ethical Issues
PHI 593 - Ethics and the Health professions

## Political Science

PSC 306 - African American Politics
PSC 314 - Public Opinion and Electoral Behavior
PSC 319 - Gender and Politics
PSC 324 - Constitutional Law I
PSC 325 - Constitutional Law II
PSC 326 - Foundations of American Political Thought

PSC 327 - Modern American Political Thought
PSC 329 - The Modern American Presidency
PSC 334 - Mexico and the United States
PSC 339 - Transitions to Democracy
PSC 341 - Politics of Africa
PSC 352 - International Law
PSC 354 - Human Rights and Global Affairs
PSC 363 - Ethics and International Relations
PSC 366 - Representations of the Middle East
PSC 371 - Democratic Theory and Politics
PSC 374 - Law and Society
PSC 384 - Sexuality and the Law
PSC 386 - Gender, Militarism, and War
PSC 387 - Ethnic Conflict
PSC 406 - Citizenship from Modernity to Globalization
PSC 412 - Global Governance: The United Nations System

PSC 413 - Identity and Difference

## Psychology

PSY 329 - Biopsychological Perspectives on Women's Health

PSY 379 - The Social Psychology of Stigma

## Public Affairs

PAF 101 - An Introduction to the Analysis of Public Policy

## Religion

REL 106 - What Is Belief?
REL 125 - Religion and Sexuality
REL 142 - Native American Religion
REL 221 - Morality and Community
REL 252 - Ethical Decision Making
REL 255 - Depth Psychology and Religious Ethics
REL 283 - India's Religious Worlds
REL 292 - The Human and Divine in Christian and Muslim Philosophy

REL 324 - Religions and Storytelling
REL 326 - Religion and Film
REL 337 - Shoah: Responding to the Holocaust
REL 347 - Religion and the Conquest of America
REL 348 - Religion and American Consumerism
REL 357 - Queerly Religious
REL 359 - Stem Cells and Society
REL 384 - Goddesses, Women and Power in Hinduism

REL 394 - Sources of the Self: Finding the "।" in Religion \& Philosophy
REL 395 - Religions and the Natural Environment
REL 551 - Ethics and the Health professions

## Russian

RUS 331 - Russian Culture Through Fiction and Film

## Sociology

SOC 102 - Social Problems
SOC 230 - Intergroup Dialogue
SOC 248 - Ethnic Inequalities and Intergroup Relations

SOC 254 - Comparative Study of American Ethnic Communities

SOC 281 - Sociology of Families
SOC 301 - Contemporary Asian Americans
SOC 305 - Sociology of Sex and Gender
SOC 353 - Sociology of the African American Experience

SOC 354 - Gender, Militarism, and War
SOC 364 - Aging and Society
SOC 410 - Seminar on Social Change

SOC 433 - Race, Class, and Gender
SOC 456 - LGBT Studies in Sociology

## South Asian Studies

SAS 283 - India's Religious Worlds
SAS 384 - Goddesses, Women and Power in Hinduism

SAS 426 - Cultures and Politics of Afghanistan and Pakistan

## Spanish

SPA 453 - Spanish Literature (20th Century)
SPA 457 - Civil War to Contemporary Spanish Literature and Culture

SPA 463 - Contemporary Latin American Theater
SPA 465 - Literature and Popular Culture
SPA 475 - Women, Myth and Nation in Latin American Literature
SPA 481 - The Literature of Latinos in the United States

## Women's and Gender Studies

WGS 101 - Introduction to Women's and Gender Studies

WGS 192 - Gender and Literary Texts
WGS 201 - Transnational Feminist Studies
WGS 230 - Intergroup Dialogue
WGS 248 - Ethnic Inequalities and Intergroup Relations

WGS 258 - Poverty and Discrimination in America
WGS 281 - Sociology of Families
WGS 297 - Philosophy of Feminism
WGS 303 - Black Women Writers
WGS 319 - Gender and Politics
WGS 325 - Economics and Gender
WGS 326 - Persons in Social Context
WGS 328 - Human Diversity in Social Contexts
WGS 329 - Biopsychological Perspectives on Women's Health
WGS 343 - Latina Feminist Theories
WGS 349 - Women in America: Civil War to Present
WGS 354 - Gender, Militarism, and War
WGS 362 - Youth, Schooling and Popular Culture
WGS 364 - Aging and Society
WGS 367 - Gender in a Globalizing World
WGS 384 - Goddesses, Women and Power in Hinduism
WGS 389 - LGBT History

WGS 395 - Gender and Popular Culture WGS 403 - African and Caribbean Women Writers WGS 413 - Identity and Difference

WGS 433 - Race, Class, and Gender
WGS 444 - Schooling \& Diversity
WGS 452 - Feminism and Postcolonial Studies
WGS 455 - Culture and AIDS
WGS 456 - LGBT Studies in Sociology
WGS 473 - Women, Rap and Hip-Hop Feminism
WGS 475 - Women, Myth and Nation in Latin American Literature
WGS 494 - Music and Gender
WGS 512 - African American Women's History

## Writing and Rhetoric

WRT 255 - Advanced Argumentative Writing
WRT 301 - Advanced Writing Studio: Civic Writing
WRT 413 - Rhetoric and Ethics
WRT 423 - African American Rhetoric
WRT 424 - Studies in Writing, Rhetoric, Identity
WRT 440 - Studies in the Politics of Language and Writing

## Other Schools and Colleges

*Apply as Non-Arts \& Sciences Credit

## School of Education

EDU 310 - The American School *

## David B. Falk College of Sport and <br> Human Dynamics <br> CFS 367 - Child and Family in Cross-Cultural Perspectives *

SWK 314 - Social Welfare Policy and Services I *
SWK 315 - Social Welfare Policy and Services II *
SWK 326 - Persons in Social Context
SWK 328 - Human Diversity in Social Contexts

## School of Information Studies

IST 443 - Critique of the Information Age *
IST 456 - Information Policies and Decision Making *

Martin J. Whitman School of Management
LPP 467 - Management and Ethics *
Only Available for Students in the
Renee Crown Honors Program

HNR 260 - Topics in the Social Sciences Honors Interrogation: Engine of Justice?

HNR 260 - Topics in the Social Sciences Honors History of the Women's Suffrage Movement

HNR 340 - Topics in the Humanities Honors Folk Arts, Festival, and Public Display

HNR 340 - Topics in the Humanities Honors Folk Art and Oral Traditions of India
HNR 340 - Topics in the Humanities Honors Good Film, Bad People

HNR 340 - Topics in the Humanities Honors Migrating Memories/Migrating Arts

HNR 340 - Topics in the Humanities Honors American Parsifal
HNR 350 - Topics in the Natural Sciences and Mathematics Honors Linked Lenses: Science, Philosophy, and the Pursuit of Knowledge
HNR 360 - Topics in the Social Sciences Honors Welcome to Your Future

HNR 360 - Topics in the Social Sciences Honors Modern American Politics Through Fiction
HNR 360 - Topics in the Social Sciences Honors Women's Rights: A Native American Tradition

## Additional Information

Transfer and other credit are not accepted for the Critical Reflections Requirement except when defined in articulation agreements.

## Special Degree Offerings

For additional information on the following options, contact: Advising and Academic Support
Office:
323 Hall of Languages
Call: 315-443-3150
E-mail: casadvising@syr.edu
Options for Study in the College of Arts and Sciences.

There are two general options for study leading to the B.A. or B.S. degree for undergraduates in the College of Arts and Sciences: the Standard Program and the Selected Studies Program.

The Standard Program involves the Liberal Arts Core, a major, electives and, perhaps, a minor or an additional major. The first two years are devoted largely to work that satisfies requirements of the Liberal Arts Core. The major is chosen by the end of the second year.
The selected studies program offers the student an opportunity to develop a highly individualized
curricular plan. This program, which can lead to the B.A. or the B.S. degree, is intended to meet individual needs. It provides considerable freedom in curricular planning, but also requires greatly increased responsibility on the part of the student. Each student in the selected studies program develops a four-year program of study based on academic goals. He or she is assisted by a faculty advisor who helps to formulate an academically sound curriculum. For additional information please see Selected Studies.

## Combined Programs

The College of Arts and Sciences offers combined programs of study with certain professional schools and colleges within the University. These programs lead to two degrees and require at least 30 credits beyond the minimal requirement for one degree and a total of at least 150 credits. This means that it generally takes five years (10 semesters) to complete a combined program. Specific requirements vary from program to program and are described under individual program headings. Students pursuing a combined program in the College of Arts and Sciences must complete all college requirements relevant to the chosen program of study. A minimum of 96 credits in the College of Arts and Sciences is required. For a general definition and requirements of a combined program and comparison with other kinds of programs, refer to the appropriate chart in the Academic Rules section of this catalog.
A combined program in the College of Arts and Sciences is offered with the College of Engineering and Computer Science and results in the Arts and Sciences/Art, BA or B.S. in Arts and Sciences and the B.S. in Engineering.

## Dual Enrollments

The College of Arts and Sciences offers dual enrollments in cooperation with certain professional schools and colleges within the University. These lead to a single degree jointly authorized and certified by the cooperating schools. The standards and procedures for admission vary and are described under individual headings. With careful course selection and planning, students are able to finish within four years (eight semesters) and within the 120126 credits required for a degree. (For a general definition and requirements of a dual program and comparison with other kinds of programs, refer to the appropriate chart in the Academic Rules section of this catalog.)

Dual enrollments in Arts and Sciences are offered only with the School of Education and the S.I. Newhouse School of Public Communications.

For the Dual program offered with S.I. Newhouse School of Public Communications: Contact Rosanna Grassi, Associate Dean, S.I. Newhouse

School of Public Communications, 315 Newhouse 3, 315-443-1908 or

For the College of Arts and Sciences, contact Advising and Academic Support, 323 Hall of Languages, 315-443-3150, casadvising@syr.edu

Students in the College of Arts and Sciences who are dually enrolled in the S.I. Newhouse School of Public Communications receive the bachelor's degree jointly awarded by both colleges.
Students complete the requirements for the B.A. degree or the B.S. degree from the College of Arts and Sciences, including at least 90 credits in Arts and Sciences coursework and an Arts and Sciences major, or a selected studies program approved by the dean of the College of Arts and Sciences. Students also satisfy requirements for a major in the S. I. Newhouse School of Public Communications, chosen from the professional fields of advertising; broadcast and digital journalism; graphic design; magazine; newspaper and online journalism; photography; public relations; or television, radio, and film. At least 122 credits, including electives, are required to graduate.

Students who wish to enroll in this program should request dual enrollment at the time of admission to the University, or they may consult the School of Public Communications about an intra-University transfer to the dual program during the first or sophomore year.

## First-Year Students Entering the Dual Program

Students entering the Arts and Sciences/Public Communications Dual Degree in their first year will be required to satisfy the core requirements for the dual degree by completing the requirements of the College of Arts and Sciences Liberal Arts Core.

Students entering the dual program after the first year and who are either singly enrolled in the College of Arts and Sciences or the S.I. Newhouse School of Public Communications satisfy the core requirements for the dual degree by completing the requirements of the school or college in which they were originally singly enrolled. In either case, the College of Arts and Sciences is the home college.

## Other Special Options

## Arts and Sciences/Art

The special options degree program in arts and sciences/art is designed for students who wish to include studio arts in conjunction with studies in humanities and/or sciences. The option permits any major in the College of Arts and Sciences to be joined with studio arts work. The degree
awarded at the completion of undergraduate study is a B.A. in the arts and sciences major with the supplementary designation "and art." The degree is singly awarded by the College of Arts and Sciences.

## Combined Bachelor's/Master's Degrees - Secondary Teacher Preparation Programs

School of Education contact: Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall. mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for a New York Teaching certification for grades 7-12 in English, mathematics, a science area, or social studies. It is an alternative to the existing undergraduate Arts and Sciences/Education dual programs in these areas, and an option that often takes less time and fewer credits than earning the entire master's degree in education after completion of a general Arts and Sciences degree.
The combined bachelor's/master's teacher preparation programs were designed to meet the needs of Arts and Sciences undergraduates who, because of a later decision to become a teacher, would need to add a semester or more to their undergraduate study to complete the existing undergraduate Arts and Sciences/Education program. It also serves those who want or need more flexibility in their undergraduate program than the dual undergraduate degree allows.
Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years. Students begin taking education courses as undergraduates, including some in the fourth year that are taken for graduate credit, and apply to become graduate students for their last two semesters. Some summer study (not necessarily at SU) may be required.
The combined program has a two-stage admission process. The first stage involves meeting with the School of Education contact as early as possible to develop a plan, and, if a decision to pursue the program is made, completing a form signed by Education and a new declaration of program of study form in Arts and Science to declare the Arts and Sciences program with "Teacher Preparation $/ 5$ year" appended to the title (e.g., "History (TchrPrep/5yr)" instead of "History"). The second admission stage involves an application to graduate school. Each admission stage requires a 3.0 cumulative GPA and a 3.0 GPA in the courses from the subject to be taught. The second stage also requires successful performance in the undergraduate education courses.

The choices of Arts and Sciences majors, and the course requirements for the Arts and Sciences major, the Liberal Arts Core, and other requirements related to the major are the same for these combined programs as those for students completing the dual enrollment undergraduate Arts and Sciences/Education program. These details about specific adjustments necessary to the Liberal Arts Core and to Arts and Sciences major may be found in the section describing Dual Arts and Sciences/ Education Programs.

Because of the specific course requirements and sequencing of courses, it is important that students interested in one of these programs meet with the Education contact as soon as possible to develop a plan. EDU 204, the first education course, must be taken no later than spring of the junior year.

## Other Undergraduate Programs of the College

Center for Innovative Learning (iLEARN)

Kandice L. Salomone, Director
323 Hall of Languages, 315-443-1643
The center for Innovative Learning (iLEARN) of the College of Arts and Sciences supports a variety of innovative educational programs and undergraduate research activities in the College and its departments. It also serves as a clearinghouse for information about undergraduate research and other innovative learning opportunities, as well as a source of encouragement and support for their further development.
The center helps students complement traditional classroom and laboratory work with enhanced out-of-classroom learning experiences. These experiences represent active learning at its best, tapping students' creativity, curiosity, and drive. These kinds of opportunities also enable students to apply their knowledge and skill to independent research and other scholarly projects that engage students with current issues, and give them the kinds of experiences helpful in making career choices. Students may choose to earn academic or experience credit.

Programs Offered:
Undergraduate Research Program
The Syracuse University Undergraduate Mock Trial Program

Ruth Meyer Undergraduate Research Scholars Program

## Funding Opportunities

iLEARN has funds available for use by Arts and Sciences undergraduate students, faculty, and
departments/programs for eligible projects. Eligibility is dependent on a project's relevance to the types of educational activities listed in the mission statement. Inquiries should be made to the director of iLEARN.

## English to Speakers of Other Languages

Contact: Margo Sampson, Languages, Literatures, and Linguistics, 340C H.B. Crouse, 315-4439484.

Syracuse University offers a program in English to speakers of other languages (ESOL, ESL) for any student whose native language is not English. After taking the English Language Assessment Exam (ELAE) and receiving the results, students are recommended to take courses at the intermediate or advanced level. At the intermediate level, the program integrates the four skills of speaking, listening, reading, and writing. At the advanced level, the program focuses on composition, reading, criitical thinking and research paper writing. For undergraduate students these courses may substitute for courses in the Writing Program.

## First Year Forum

Contact: Office of Curriculum, Instruction and Programs, 441 Hall of Languages, 315-443-1414
The First Year Forum is a one-credit course required of all new, first-year students in the college and aids with the transition from secondary school to college life, as well as deepens students' first-year intellectual experiences by providing a personal and less academically-specialized encounter with a faculty member. Each forum section consists of approximately 15 students, is led by a regular faculty member, and meets once a week for 8 to 9 weeks in the fall semester to share ideas, experiences and concerns, and topics of general interest. A focal point of the forum is the Milton First Year Lecture, which brings a nationally prominent speaker to campus to address the firstyear students.

## Renée Crown University Honors Program <br> Professor Stephen Kuusisto, Director

306 Bowne Hall, 315-443-2759
The Renée Crown University Honors Program is a selective, demanding, and rewarding program for outstanding students who seek intense intellectual challenge and are prepared to invest the extra effort required to meet that challenge.
It is marked by four distinguishing characteristics: heightened expectations;
participation in a vibrant and active community of
learners;
intensity of intellectual experience; and
Special intellectual opportunities and responsibilities.

The program is open to qualified students from all undergraduate majors at Syracuse University. Its requirements, supplemental to those of their majors, stipulate that they demonstrate the attributes of depth, breadth, command of language, global awareness, civic engagement, and collaborative capacity.

Additional information can be found under Renee Crown University Honors Program in the catalog under Academic Offerings, Other Programs.

## Soling Program

Contact: Office of Curriculum, Instruction and Programs, 441 Hall of Languages, 315-443-1414
The Soling Program is an all-University program whose purpose is to foster creative and collaborative work across academic boundaries. The program focuses on problem-solving, experiential learning, and originality. Students often work as multidisciplinary teams to explore solutions to specific, real-world problems posed by the University or the community. Students from different colleges typically work on projects with broader applications than usually found in academic courses.

## Undergraduate Research Program

Kandice L. Salomone, Director
323 Hall of Languages, 315-443-1643
The Undergraduate Research Program (URP), housed in the College of Arts and Sciences but open to qualified participants from other colleges, exists to provide non-classroom, credit-bearing educational opportunities to undergraduate students. Interested qualified students work closely with Arts and Sciences faculty members in faculty-generated research projects, other projects representing the faculty member's academic interests, learning environments provided by professionals affiliated with the College of Arts and Sciences, or eligible off-campus internships with an identified Arts and Sciences advisor. The program features the apprenticeship model, and students gain firsthand experience in creative and investigative academic processes, translate theory into practice, explore the cutting edges of particular disciplines, develop closer working relationships with faculty members, and enhance their own career and educational credentials.

## Faculty Participation

The program offers Arts and Sciences faculty members a chance to extend and expand the
character of their teaching in the undergraduate context, to work closely with self-selecting, highly motivated students, to attract excellent students to continued study in their particular field of study, and to open both internal and external funding possibilities by way of undergraduate involvement in their work. Faculty member are invited to propose projects to the Director. Individual projects may extend beyond a semester in length as appropriate. The character and requirements of these projects, as well as the number of credits involved, vary greatly, since they come from across the disciplines of the College of Arts and Sciences, and sometimes from other colleges as well. The common criterion for all, however, is appropriateness to an educational credit-bearing experience for qualified undergraduate students.

## Syracuse University Abroad

Margaret Himley, Associate Provost for International Education and Engagement 106 Walnut Place, 315-443-9416

Syracuse University Abroad (SU Abroad) offers undergraduate and graduate students the opportunity to study, research, and intern abroad. Ranked among the top quality study abroad programs in the U.S., SU Abroad has centers in eight locations - London, Florence, Madrid, Strasbourg, Istanbul, Beijing, Hong Kong, and Santiago, Chile -- as well as summer, faculty-led short term and World Partner semester options offering 100 programs in 60 countries. All center programs and over 34 summer programs are available to Syracuse and visiting students alike. These programs provide fully accredited Syracuse University courses for students in majors and disciplines across the College.

## Major

African American Studies, BA

## Department Chair:

Kishi Animashaun Ducre
200 Sims Hall
315-443-4302

## Faculty

Omanii Abdullah, Joan Bryant, Horace Campbell, Linda Carty, David Kwame Dixon, Kishi Animashaun Ducre, Casarae Gibson, Janis A. Mayes, Herbert Ruffin, S.N. Sangmpam, Renate Simson, Kheli R. Willetts, James G. Williams

This interdisciplinary department offers the opportunity for study, research, and community involvement in African American Studies and enables students to explore cultural, literary, historical, socioeconomic and other issues
affecting African Americans as well as links with continental Africa and the Caribbean. The department provides a major, leading to a B.A. degree, and a minor, both with two sub-areas of specialization, one in the social sciences and one in the humanities. Students seeking a B.A. degree in African American Studies must successfully complete AAS 112/ANT 112 and either AAS 231 or AAS 232 before formal admission to the major.

## Major Requirements

## Prerequisites ( 6 credits)

All students must successfully complete two of the following courses before formal admission to the program.

AAS 112 - Introduction to African American Studies in Social Sciences
and
AAS 231 - African American Literature to 1900: An Introduction or

AAS 232 - African American Literature: Twentieth and Twenty-First Centuries

## Major Courses ( 24 credits)

At least 18 of the 24 credits required for the major in African American Studies will be in courses numbered above 299. Six of the 24 credits may be chosen from AAS 202, AAS 233, AAS 234, AAS 235 , and AAS 241 . Six credits must be taken in the AAS core:

AAS 332 - African American History: Through the 19th Century or
AAS 333 - African American History: After the 19th Century
and
AAS 525 - Research Methods in African American Studies

Students must also complete six credits in an area of specialization:

## Humanities Track

Choose one:
AAS 331 - The African American Novel: Twentieth and Twenty-First Centuries
AAS 433 - Harlem Renaissance:Literature and Ideology

AAS 305 - African Orature
Choose one:
AAS 345 - African American Religious History
AAS 361 - Art of the Black World

Social Sciences Track
AAS 470 - Experience Credit
And one of the following:
AAS 306 - African American Politics
AAS 341 - Politics of Africa
AAS 353-Sociology of the African American Experience

## African American Studies

Twelve credits may be taken in additional advanced courses in African American studies chosen in consultation with the major advisor.

## Humanities Track

AAS 300 - Selected Topics in African American Studies or

AAS 400 - Selected Topics in African American Studies or

AAS 500 - Selected Topics in African American Studies

AAS 302 - Contemporary African American Theater
AAS 303 - Black Women Writers
AAS 304 - Workshop:African American Theater
AAS 305 - African Orature
AAS 307 - African Women Writers
AAS 310 - Elements of Theater Production
AAS 312 - Pan Africanism
AAS 327 - History of Southern Africa
AAS 331 - The African American Novel: Twentieth and Twenty-First Centuries

AAS 332 - African American History: Through the 19th Century
AAS 333 - African American History: After the 19th Century

AAS 338 - Creative Writing Workshop
AAS 345-African American Religious History
AAS 361 - Art of the Black World
AAS 367 - Protest Movements \& African American Artists:19th \& 20th Centuries

AAS 402 - Slavery and Abolition
AAS 403 - African and Caribbean Women Writers
AAS 408 - Masters of American Black Music
AAS 409 - History of Jazz, 1940 to Present
AAS 433 - Harlem Renaissance:Literature and Ideology

AAS 434 - Underground Railroad
AAS 465 - The Image of Blacks in Art and Film
AAS 470 - Experience Credit Internship in African American Studies

AAS 490 - Independent Study or
AAS 290 - Independent Study
AAS 512 - African American Women's History
AAS 513 - Toni Morrison: Black Book Seminar

## Social Sciences Track

AAS 300 - Selected Topics in African American Studies or

AAS 400 - Selected Topics in African American Studies or

AAS 500 - Selected Topics in African American Studies
AAS 306 - African American Politics
AAS 309 - Race, Gender and Sexuality in the African Diaspora

AAS 312 - Pan Africanism
AAS 326 - Africa Since 1800
AAS 341 - Politics of Africa
AAS 346 - Comparative Third World Politics
AAS 353 - Sociology of the African American Experience

AAS 364 - African International Relations
AAS 365 - International Political Economy of the Third World

AAS 380 - International Course or
AAS 480 - International Course or
AAS 580 - International Course
AAS 390 - Independent Study or
AAS 490 - Independent Study or
AAS 590 - Independent Study
AAS 402 - Slavery and Abolition
AAS 410 - Seminar on Social Change
AAS 416 - Race, Crime and Punishment
AAS 427 - New York City: Black Women Domestic Workers or

AAS 627 - New York City: Black Women Domestic Workers

AAS 434 - Underground Railroad
AAS 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism or

AAS 645 - The Caribbean: Sex Workers, Transnational Capital, and Tourism
AAS 470 - Experience Credit Internship in African American Studies

AAS 501 - African American Sociological Practice:1900-45

AAS 510 - Studies in African American History
AAS 540 - Seminar:African American Studies

## Study Abroad

Syracuse University Abroad offers Syracuse University credit bearing study options for students of African American Studies in locations that include Tanzania, Kenya, Ghana, and Egypt. Two summer programs are also available. They are Cultural Politics: Contemporary Brazil and Paris Noir/Black Paris: Literature, Art, and Contemporary Life in Diaspora.

## Anthropology, BA

## Department Chair:

John Burdick
209 Maxwell Hall
315-443-2200

## Faculty

Douglas V. Armstrong, Hans C. Buechler, John S. Burdick, A.H. Peter Castro, Christopher R. DeCorse, Azra Hromadzic, Shannon A. Novak, Deborah Pellow, Guido Pezzarossi, Lars Rodseth, Robert A. Rubinstein, Maureen Trudelle Schwarz, Theresa A. Singleton, John Marshall Townsend, Cecilia Van Hollen, Susan S. Wadley

Anthropology explores the entire range of human experiences in the past and present. Our department offers undergraduate courses covering the breadth of the discipline, including physical anthropology (the study of human evolution and biological variation); archeology (the study of prehistoric and historic cultures through material remains); linguistics (the study of language - its structure, historic developments, and social aspects); cultural anthropology (the study of contemporary societies); and applied anthropology (the use of anthropological methods and theory to solve real-world problems). Ongoing research by our faculty and graduate students covers a broad array of topics, from slave settlements in Jamaica to women and development in India; from religious movements in Brazil to sustainable agriculture in Nepal; from forestry in Kenya to the Underground Railroad in Syracuse. Current research sites span the globe, including South and East Asia, South and North America, West and East Africa, the Middle East, Europe, and the Caribbean.
Undergraduate training in anthropology is useful in many fields, including education, international business, law, journalism, cultural resources management and public service. For students interested in future graduate studies in anthropology, our program offers a solid ground in theory, methods, ethics and practical application.
Undergraduate students are encouraged to explore anthropology not only through coursework, but with direct involvement in laboratory
research and field work. Our department has fully equipped archaeology and physical anthropology laboratories, providing a variety of research opportunities. A well-established archaeological field training program is offered each summer. Field experience in cultural anthropology is available through community internships, independent studies, and ongoing faculty research. We also recommend that students consider spending a semester or two in another country through the University's SU Abroad Program, as a way of enhancing their major with true cross-cultural experience. For information contact the Department of Anthropology Undergraduate Director.

## Major Requirements

The program, leading to a B.A. in anthropology, requires 33 credits in anthropology courses. Of these, 18 credits are taken in required courses and 15 are electives.

## Required Courses (18 credits)

Introductory Courses: Three courses (9 credits)

## Cultural Anthropology

ANT 111 - Introduction to Cultural Anthropology

## Physical/Biological Anthropology

ANT 131 - Introduction to Biological Anthropology

## Archaeology - either

ANT 141 - Introduction to Archaeology and Prehistory

ANT 145 - Introduction to Historical Archaeology

## Area Focus and Regional Perspectives

 on Culture: One course (3 credits):Completion of at least one course from the following list:

## ANT 318 - African Cultures

ANT 322 - South American Cultures
ANT 323 - Peoples and Cultures of North America
ANT 324 - Modern South Asian Cultures
ANT 325 - Anthropology of American Life in Film
ANT 326 - Africa Through the Novel
ANT 382 - Health in the Middle East
ANT 421 - Gender \& Sexuality in South Asia
ANT 426 - Cultures and Politics of Afghanistan and Pakistan

ANT 427 - Brazil: Anthropological Perspectives
ANT 428 - Transformation of Eastern Europe
ANT 429 - Cultures of the Iberian Peninsula

## UNDERGRADUATE COURSE CATALOG

ANT 446 - Caribbean Archaeology
ANT 468 - Middle East in Anthropological Perspective

ANT 471 - Religion and Society in Brazil
ANT 473 - Peace and Conflict in the Balkans:
Anthropological Perspectives
ANT 523 - Globalization and its Discontents in Latin America
selected 400 and area courses by petition.
Anthropological Methods: One of the following courses (3 credits):

ANT 433 - Human Osteology
ANT 442 - Methods in Archaeology
ANT 443 - Field Methods in Archaeology
ANT 444 - Laboratory Analysis in Archaeology
ANT 481 - Ethnographic Techniques
ANT 482 - Life Histories/Narratives
ANT 484 - Social Movement Research Methods
Anthropological Theory: One course (3 credits):
ANT 311 - Anthropological Theory

## Degree

Bachelor of Arts in Anthropology

## Total Required Credits: 33

## Electives (15 credits)

The student majoring in anthropology is free to enroll in any course offered by the Department of Anthropology as long as the prerequisites for that course are satisfied. All students are encouraged to enroll in elective courses that are of interest to them.

At least 12 of the 15 elective credits required must be at the 300 level and above.

## Applied Mathematics, BA

## Contact:

## Advisors

S.P. Diaz, L. Kovalev, D. Zacharia

## Faculty

Uday Banerjee, Pinyuen Chen, Dan Coman, J. Theodore Cox, Steven Diaz, Helen M. Doerr, Jack E. Graver, Philip S. Griffin, Peter D. Horn, Tadeusz Iwaniec, Hyune-Ju Kim, Mark Kleiner, Leonid

Kovalev, Loredana Lanzani, Graham J. Leuschke, Adam Lutoborski, Joanna 0. Masingila, Terry R. McConnell, Claudia Miller, Jani Onninen, Evgeny Poletsky, Declan Quinn, Lixin Shen, John Ucci, Gregory Verchota, Andrew Vogel, William Volterman, Yi (Grace) Wang, Stephan Wehrli, William Wylie, Yuan Yuan, Dan Zacharia
Two degrees in Applied Mathematics are offered: Bachelor of Arts and Bachelor of Science
B.A. in Applied Mathematics is recommended for those students who are pursuing another quantitatively rich major which they consider their primary interest. The toolkit of applicable mathematical methods will enable them to advance further in their own field, whether in industry or in academia.

## Preliminary and Extradisciplinary Requirements

Preliminary and extra-disciplinary requirements for both B.A and B.S. degrees

Complete 18 credits in the following classes with no grade below a C: MAT 295, MAT 296, MAT 331, MAT 397, and MAT 375 or CIS 375. These courses are prerequisites for most upperdivision courses. The following sequence is recommended: MAT 295 in the first semester; MAT 296 in the second semester; MAT 331, MAT 397 in the third semester; and MAT 375/CIS 375 when appropriate. However, a student with knowledge of trigonometry and a year of high school calculus may be able to enter the sequence at MAT 296 or even MAT 397; a student with less preparation may be advised to complete MAT 194 before beginning the calculus sequence. Students considering becoming mathematics majors are strongly encouraged to talk to a mathematics major advisor as soon as possible to ensure appropriate selection of courses.
Complete a course in computing such as CPS 196, ECS 102 or ECS 104. A similar course may be substituted with advisor's approval.

Complete two sequences of two approved science courses outside of the mathematics department, such as BIO 121 - BIO 123, CHE 106 (CHE 107) - CHE 116 (CHE 117), PHY 211 (PHY 221) - PHY 212 (PHY 222), ECN 203- ECN 302, ECN 203 - ECN 311, ECS 221 - ECS 222, ELE 231 - ELE 232, or another, more advanced sequence with the approval of a mathematics major advisor. This requirement is waived if the student earns either (i) a minor in Applied Statistics, Biology, Chemistry, Computer Science, Economics, Engineering disciplines, Information Management \& Technology, or Physics, or (ii) a major in one of natural sciences, engineering/technology disciplines, economics or finance.

## B.A. Degree Requirements

In addition to the preliminary and extradisciplinary requirements described above, the student must earn credit for the following courses, with a grade average of at least 2.0.

## Three required courses:

MAT 414 - Introduction to Ordinary Differential Equations

MAT 532 - Applied Linear Algebra or
MAT 531 - Second Course in Linear Algebra MAT 581 - Numerical Methods with Programming

Two courses chosen out of one of the following groups:

## Differential and Linear Equations:

MAT 511 - Advanced Calculus
MAT 517 - Partial Differential Equations and Fourier Series

MAT 518 - Fourier Series, Transforms and Wavelets
MAT 682 - Numerical Linear Algebra (See graduate catalog for course description).

Analysis:
MAT 412 - Introduction to Real Analysis I
MAT 511 - Advanced Calculus
MAT 512 - Introduction to Real Analysis II
MAT 513 - Introduction to Complex Analysis
MAT 554 - Differential Geometry
Probability and Statistics:
MAT 521 - Introduction to Probability
MAT 525 - Mathematical Statistics
MAT 526 - Introduction to Stochastic Processes

## Additional Information

With consent of the mathematics major advisor, these grouping may be altered.

## 3 credits of elective mathematics courses:

MAT 412 or those MAT courses numbered 490 or higher. With prior approval of the student's major advisor, a mathematically rich 500+ level course in another department may be substituted for the mathematics elective.

Applied Mathematics, BS

# Contact: 

## Advisors:

S.P. Diaz, L. Kovalev, D. Zacharia

## Faculty

Uday Banerjee, Pinyuen Chen, Dan Coman, J. Theodore Cox, Steven Diaz, Helen M. Doerr, Jack E. Graver, Philip S. Griffin, Peter D. Horn, Tadeusz Iwaniec, Hyune-Ju Kim, Mark Kleiner, Leonid Kovalev, Loredana Lanzani, Graham J. Leuschke, Adam Lutoborski, Joanna O. Masingila, Terry R. McConnell, Claudia Miller, Jani Onninen, Evgeny Poletsky, Declan Quinn, Lixin Shen, John Ucci, Gregory Verchota, Andrew Vogel, William Volterman, Yi (Grace) Wang, Stephan Wehrli, William Wylie, Yuan Yuan, Dan Zacharia

Two degrees in Applied Mathematics are offered: Bachelor of Arts and Bachelor of Science.
B.S. in Applied Mathematics is recommended for those students who intend to pursue a career in a field that requires advanced mathematical training, often beyond an undergraduate degree. Students who plan to pursue graduate study in applied mathematics should obtain the B.S. degree and consider taking at least one first-year graduate (600-level) course.

## Preliminary and Extradisciplinary Requirements

Preliminary and extra-disciplinary requirements for both B.A and B.S. degrees

Complete 18 credits in the following classes with no grade below a C: MAT 295, MAT 296, MAT 331, MAT 397, and MAT 375 or CIS 375. These courses are prerequisites for most upperdivision courses. The following sequence is recommended: MAT 295 in the first semester; MAT 296 in the second semester; MAT 331, MAT 397 in the third semester; and MAT $375 /$ CIS 375 when appropriate. However, a student with knowledge of trigonometry and a year of high school calculus may be able to enter the sequence at MAT 296 or even MAT 397; a student with less preparation may be advised to complete MAT 194 before beginning the calculus sequence. Students considering becoming mathematics majors are strongly encouraged to talk to a mathematics major advisor as soon as possible to ensure appropriate selection of courses.

Complete a course in computing such as CPS 196, ECS 102 or ECS 104. A similar course may be substituted with advisor's approval.

Complete two sequences of two approved science courses outside of the mathematics department, such as BIO 121 - BIO 123, CHE

106 (CHE 107) - CHE 116 (CHE 117), PHY 211 (PHY 221) - PHY 212 (PHY 222), ECN 203- ECN 302, ECN 203 - ECN 311, ECS 221 - ECS 222, ELE 231 - ELE 232, or another, more advanced sequence with the approval of a mathematics major advisor. This requirement is waived if the student earns either (i) a minor in Applied Statistics, Biology, Chemistry, Computer Science, Economics, Engineering disciplines, Information Management \& Technology, or Physics, or (ii) a major in one of natural sciences, engineering/technology disciplines, economics or finance.

## B.S. Degree Requirements

Students interested in pursuing the B.S. degree in Applied Mathematics obtain, in advance, the approval of a mathematics major advisor and the department chair of a petition to the effect that the upper-division courses to be taken satisfy the requirement for a B.S. degree.

In addition to the preliminary and extradisciplinary requirements described above, the student must earn credit for the following courses, with a grade average of at least 2.0.

## Differential Equations sequence:

MAT 414 - Introduction to Ordinary Differential Equations

MAT 517 - Partial Differential Equations and Fourier Series

## Numerical Methods course:

MAT 581 - Numerical Methods with Programming

## Table 1: sequences for B.S. in Applied Mathematics

Linear Transforms Sequence:
First course:
MAT 532 - Applied Linear Algebra or
MAT 531 - Second Course in Linear Algebra

## Second course:

MAT 518 - Fourier Series, Transforms and Wavelets or

MAT 682- Numerical Linear Algebra (See graduate catalog for course description).

## Analysis Sequence:

First course:
MAT 412 - Introduction to Real Analysis I
Second course:

MAT 511 - Advanced Calculus or
MAT 512 - Introduction to Real Analysis II or
MAT 513 - Introduction to Complex Analysis or
MAT 554 - Differential Geometry
Probability and Statistics
Sequence:

## First course:

MAT 521 - Introduction to Probability

## Second course:

MAT 525 - Mathematical Statistics or
MAT 526 - Introduction to Stochastic Processes

## Electives:

9 credits of elective mathematics courses numbered 490 or higher. With prior approval of the student's major advisor, mathematically rich $500+$ level courses in other departments may be substituted for the mathematics electives.

## Additional Information

Distinction in Applied Mathematics is awarded by the Mathematics Department upon completion of a B.S. in Applied Mathematics with a minimum cumulative GPA of 3.4 , a minimum GPA of 3.6 in mathematics (MAT) courses at the 300+ level, and either an A or A- in the Senior Seminar or a high-quality Honors Thesis. See the Mathematics Department undergraduate advisor for additional requirements.

## Art History, BA

Theo Cateforis, Chair
Suite 308 Bowne Hall
315-443-4835
Romita Ray, Undergraduate Director
Suite 308 Bowne Hall
315-443-5030

## Faculty

Luis Castañeda, Sally Cornelison, Laurinda Dixon, Wayne Franits, Jeehee Hong, Richard Ingersoll, Matilde M. Mateo, Alick McLean, Jonathan Nelson, Romita Ray, Sascha Scott
The Department of Art and Music Histories was one of the first in the country dedicated to the study of the history of art and music from an interdisciplinary perspective. The department offers courses in most major periods of the history of visual and musical arts from ancient to postmodern times. The research and teaching specialties of the art history faculty include art and medicine in the early modern period,

Northern and Italian Renaissance art, 17thcentury Dutch painting, Chinese, Japanese, and Korean art, 19th- and 20th-century European art, South Asian art and Architecture, American and Latin American art and architecture

Studies in the history of architecture are offered in association with the faculty of the School of Architecture (see program description under "History of Architecture" in this section of the catalog). Cooperative programs with the College of Visual and Performing Arts, the S.I. Newhouse School of Public Communications, and other divisions of the University allow students to take courses in studio art, and public communications.

Students who major in one of the department's disciplines are strongly encouraged to take a foreign language and to study abroad.

## Major Requirements

The major in art history requires 30 credits in art history courses numbered above 299. Students in this specialized major may also include 6 credits of art studio work at any level in the required 30 credits. Students may petition to have up to 9 credits of appropriate courses in art history taken outside the department (non-HOA courses) count toward the art history major.

## Additional requirements for the art history major follow:

## Distribution Requirement

Course offerings in art history are divided into five broad categories: ancient/medieval; Northern/ Italian Renaissance; Baroque/18th-century European; modern/American; and non-Western. Art-history majors are required to take at least one course in each of these five categories.

## 500-level Course Requirement

Art history majors are required to take at least one course at the 500 level or above. 500 -level or above courses are customarily open to advanced undergraduate majors as well as to graduate students in the M.A. program in art history. Such courses offer more detailed study of particular fields within art history than those numbered at the 300 and 400 levels.

## Senior Seminar Requirement

During the fall semester of their senior year, art history majors are required to successfully complete a senior seminar. This seminar explores the practical aspects of the discipline, paying particular attention to potential careers and professional research and writing.

## Arts and Sciences/Art, BA

## Arts and Sciences/Art

## Contact:

Romita Ray, Art and Music Histories
Suite 308 Bowne Hall
315-443-5030
To arrange a required portfolio review: Office of Recruitment, College of Visual and Performing Arts, 202 Crouse College, 315-443-2769.
Coordinator for College of Visual and Performing Arts: TBA

## Art faculty:

See "Faculty, College of Visual and Performing Arts, School of Art and Design"

The special options degree program in arts and sciences/art is designed for students who wish to include studio arts in conjunction with studies in humanities and/or sciences. The option permits any major in the College of Arts and Sciences to be joined with studio arts work. The degree awarded at the completion of undergraduate study is a B.A. in the arts and sciences major with the supplementary designation "and art." The degree is singly awarded by the College of Arts and Sciences.

## Requirements

Under no circumstances will students be permitted to enter this special program after they have completed the first semester of their sophomore year. A portfolio is required for admission into the program.

## Arts and Sciences Requirements

At least 9 credits must be completed in the College of Arts and Sciences (including the arts and sciences core, usually 60 credits). Students also complete an arts and sciences major (usually 30 credits) including 6 credits of upper-division art history.

## School of Art and Design Requirements

The 30 -credit option involves 15 credits of introductory design, drawing, and painting, followed by 15 elective credits in painting, drawing, fiber arts, ceramics, and/or sculpture.

## Basic Design: 6 credits

FND 115 - Two-Dimensional Creative Processes
FND 117 - Dimensional Arts
Drawing: 6 credits
FND 113 - Foundation Drawing

FND 114 - Special Topics in Foundation Drawing

## Painting: 3 credits

PTG 203 - Painting and Drawing for Non-Art Majors
PTG 204 - Painting and Drawing for Non-Art Majors

Studio Arts Electives: 15 credits

## Additional Information

All FND (Foundation) course requirements (12 credits) must be completed within the first 3 semesters of enrollment in the program. Moreover, students must complete at least 9 credits of their 12-credit FND requirements BEFORE they will be allowed to enroll in upper-level courses.

There is no provision for advanced work in nonstudio areas of the School of Art and Design, leading to degrees such as the B.F.A. or B.L.D.

## Arts and Sciences/Music, BA

## Program contact:

Theodore Cateforis, Director of Undergraduate Studies for Music History and Cultures, Department of Art and Music Histories, 308
Bowne Hall, 315-443-4835

## Arts and Sciences faculty:

See faculty listings under individual programs.

## Music faculty:

See "Faculty, College of Visual and Performing Arts, School of Music"

This special options degree program provides the opportunity to combine any degree in the College of Arts and Sciences with advanced studies in music performance or music composition-studies that will be taken primarily in the Setnor School of Music. To be admitted to the special options degree program, students in the College of Arts and Sciences apply through the Department of Art and Music Histories before the beginning of the sophomore year. Prospective students for the music performance and music composition degree options must meet admissions requirements administered by the Setnor School of Music.

The degree awarded after completing undergraduate studies is a B.A. in the arts and sciences major with the supplementary designation, "with advanced studies in music performance/composition" (depending on the
particular degree option). The degree is singly awarded by the College of Arts and Sciences. Completion of the major does not result in any professional or artistic certification by the Setnor School of Music or the College of Visual and Performing Arts.

## Lower-Division Requirements

Students in the special options degree program in arts and sciences/music are required to complete the Liberal Arts Core Curriculum of the College of Arts and Sciences in their first and sophomore years (normally 54-60 credits). In addition, students must fulfill the following requirements:

## Music Skills (up to 6 credits required)

Students must acquire competency in basic music theory by completing MTC 145/MTC 146 with a grade of C or above.
Introduction to Music history in its social and cultural contexts ( 6 credits).

## Students are required to

 successfully complete two courses from the following list:HOM 165 - Understanding Music I
HOM 166 - Understanding Music II
HOM 195 - Performance Live
HOM 267 - European Music from 1750-1914
HOM 268 - European and American Music Since 1914

HOM 285 - Introduction to World Music

## Advanced Studies in Music and Upper-Division Requirements

At the upper-division level, students pursue an arts and sciences degree (normally 30 credits) along with advanced studies in music performance, music industry, or music composition (26-30 credits).

Students should note that certain upperdivision courses require MTC 245 , MTC 246 as a prerequisite. Students who wish to take these courses should begin their music theory sequence with MTC 145, MTC 146.
MTC 147 - Ear Training I
MTC 148 - Ear Training II
MTC 247 - Ear Training III
MTC 248 - Ear Training IV
HOM 385 - Structure and Meaning in World Music

## Additional Credits

Students will continue their advanced studies in music by earning 15-19 additional credits in either a music performance or music composition concentration. Other types of music concentrations are also possible with approval by the Setnor School of Music faculty and may be undertaken only under the supervision of a faculty advisor.

## Performing Ensemble

In addition to the requirements below, students must participate in a Syracuse University performing ensemble for at least 6 semesters.

## Music Performance (17 credits)

## Private Lessons in Principal Performance

Six semesters of private lessons in principal performance ( 1 credit each; 6 credits total).

## Extended Lessons

Extended lessons (2 credits each) are optional and may be taken only with approval.

## Basic Conducting

Basic Conducting (2 credits)
CTG 545 - Basic Conducting

## Three courses from the following

MTC 545 - Counterpoint
MTC 546 - Analysis of Contemporary Music
HOM courses numbered above 299 (3 credits each)

MHL courses numbered above 299 (3 credits each)

## Performance

A performance of at least 10 minutes in the senior year either in Music Convocation or another appropriate venue.

## Music Composition (17-19 credits)

Four semesters of composition
(1 credit each; 4 credits total)
European and American Music Since 1945
HOM 268 - European and American Music Since 1914

Four courses from the following:

CTG 545 - Basic Conducting
MTC 535 - Orchestration
MTC 545-Counterpoint
MTC 546 - Analysis of Contemporary Music
MTC 560 - Electronic Music Composition (may be repeated once)

## Biochemistry, BS

## Contact:

James Hougland: 454 Life Sciences Complex 315-443-1134: hougland@syr.edu
Samuel H. Chan: 342 Life Sciences Complex 315-443-3182: shchan@syr.edu

## Faculty

John M. Belote, Philip N. Borer, Mark S. Braiman, Carlos Castañeda, Joseph Chaiken, Arindam Chakraborty, Samuel H.P. Chan, John D. Chisholm, Daniel Clark, Heather Coleman, James C. Dabrowiak, Steve Dorus, Robert P. Doyle, Scott E. Erdman, Thomas P. Fondy, Anthony Garza, Paul Gold, Sarah Hall, James A. Hewett, Sandra J. Hewett, James Hougland, Bruce S. Hudson, James Kallmerten, Ivan V. Korendovych, Donna Korol, Timothy M. Korter, Katharine Lewis, Yan-Yeung Luk, Jessica MacDonald, Eleanor Maine, Mathew M. Maye, Melissa Pepling, Ramesh Raina, Karin Ruhlandt, Robert Silver, Nancy I. Totah, Roy Welch, Weiwei Zheng, Jon Zubieta
Biochemistry is the study of the molecular basis of life. Lying at the interface between chemistry and biology, biochemistry is concerned with the structure and interaction of proteins, nucleic acids, and other biomolecules as related to their function in biological systems. As one of the most dynamic areas of science, biochemistry has led to improved medicines and diagnostic agents, new ways of controlling disease, and greater understanding of the chemical factors that control our general health and well-being.

The bachelor of science degree in biochemistry is appropriate for students pursuing advanced degrees in biochemistry, molecular biology, and biophysics, as well as in the biomedical fields and health professions.
Before declaring the biochemistry major, students must earn at least 30 credits in courses graded A- F at Syracuse, and earn at least a grade of $\mathrm{C}+$ in CHE 275 and BIO 326 or BIO 327.

## B.S. Degree Requirements

Core Courses ( $48-60$ credits)
BIO 121 - General Biology I or Advanced
Placement Biology Credit

BIO 305 - Integrative Biology Laboratory CHE 106 - General Chemistry Lecture I and CHE 107 - General Chemistry Laboratory I or

CHE 109-General Chemistry Lecture I (Honors and Majors) and

CHE 129 - General Chemistry Laboratory I (Honors and Majors)
CHE 116 - General Chemistry Lecture II and CHE 117 - General Chemistry Laboratory II or

CHE 119 - General Chemistry Lecture II (Honors and Majors) and

CHE 139 - General Chemistry Laboratory II (Honors and Majors)
CHE 275 - Organic Chemistry I and
CHE 276 - Organic Chemistry I Laboratory
CHE 325 - Organic Chemistry II and
CHE 326 - Organic Chemistry II Laboratory
MAT 285 - Life Sciences Calculus I or
MAT 295 - Calculus I
MAT 286 - Life Sciences Calculus II or
MAT 296 - Calculus II
PHY 211 - General Physics I and
PHY 221 - General Physics Laboratory I
PHY 212 - General Physics II and
PHY 222 - General Physics Laboratory II
BIO 326 - Genetics
BIO 327 - Cell Biology
CHE 474 - Structural and Physical Biochemistry
BIO 475 - Biochemistry Laboratory or
BCM 477 - Proteins and Nucleic Acids Lab
BCM 475 - Biochemistry I
BCM 476 - Biochemistry II

## Elective Courses

(At least 12 credits, including at least one instructional lab indicated with an asterisk)
CHE 335 - Chemical and Biochemical Analysis with Laboratory *
CHE 346 - Physical Chemistry
CHE 356 - Physical Chemistry
BIO 409 - General Microbiology *
CHE 412 - Metals in Medicine
BIO 422 - Bioinformatics for Life Scientists w/ lab *

BIO 425 - Cell and Developmental Biology Laboratory *

CHE 427-Organic Chemistry of Biological Molecules

BCM 430 - Journal Club in Molecular Pharmacology \& Structural Biology
BIO 447 - Basic Immunology
BCM 460 - Research in Biochemistry
BIO 462 - Molecular Genetics
BIO 463 - Molecular Biotechnology *
BIO 464 - Applied Biotechnology *
BIO 465 - Molecular Biology Laboratory *
BCM 484-Biomolecular Modeling w/lab *
BIO 501 - Biology of Cancer
BIO 503 - Developmental Biology
CHE 546 - Molecular Spectroscopy and Structure
CHE 575-Organic Spectroscop

## Additional Information

If both BIO 475 and CHE 477/BCM 477 are taken, one may count toward the 12 -credit elective requirement, thereby also meeting the instructional lab requirement.

BCM 460 counts once (up to 3 credits) toward elective requirement, but does not count as an instructional lab course.

## Recommended Electives

## For a Career in Biology, Biochemistry, or Molecular Biology

Preparation for Graduate School in a Department of Biology, Biochemistry, or Molecular Biology

BIO 409 - General Microbiology
CHE 412 - Metals in Medicine
CHE 427 - Organic Chemistry of Biological Molecules

BCM 430 - Journal Club in Molecular Pharmacology \& Structural Biology
BIO 447 - Basic Immunology
BCM 460 - Research in Biochemistry
BIO 462 - Molecular Genetics
BIO 463 - Molecular Biotechnology
BIO 464 - Applied Biotechnology
BIO 465 - Molecular Biology Laboratory
BCM 484 - Biomolecular Modeling w/lab
BIO 501 - Biology of Cancer
BIO 503 - Developmental Biology
For a Career in Chemistry

Preparation for Graduate School in a Department of Chemistry

CHE 335 - Chemical and Biochemical Analysis with Laboratory

CHE 346 - Physical Chemistry
CHE 356 - Physical Chemistry
CHE 412 - Metals in Medicine
CHE 427 - Organic Chemistry of Biological Molecules

BCM 430-Journal Club in Molecular
Pharmacology \& Structural Biology
BCM 460 - Research in Biochemistry
BIO 465 - Molecular Biology Laboratory
BCM 484 - Biomolecular Modeling
CHE 546 - Molecular Spectroscopy and Structure
CHE 575-Organic Spectroscopy

## For a Career in Health Professions (M.D., D.D.S., D.V.M.)

Preparation for Health Professions (M.D., D.D.S., D.V.M.)

BIO 409 - General Microbiology
CHE 412 - Metals in Medicine
BIO 447 - Basic Immunology
BCM 460 - Research in Biochemistry
BIO 462 - Molecular Genetics
BIO 465 - Molecular Biology Laboratory
BIO 501 - Biology of Cancer
BIO 503 - Developmental Biology

## For a Career in Pharmaceutical or Biotechnical Industry

Preparation for Technical Careers in Pharmaceutical or Biotechnical Industry
CHE 335 - Chemical and Biochemical Analysis with Laboratory
CHE 412 - Metals in Medicine
BIO 409-General Microbiology
CHE 427 - Organic Chemistry of Biological Molecules

BCM 430 - Journal Club in Molecular
Pharmacology \& Structural Biology
BIO 447 - Basic Immunology
BCM 460 - Research in Biochemistry
BIO 462 - Molecular Genetics
BIO 463 - Molecular Biotechnology
BIO 464 - Applied Biotechnology
BIO 465 - Molecular Biology Laboratory

BCM 484 - Biomolecular Modeling w/lab
BIO 501 - Biology of Cancer
BIO 503 - Developmental Biology
CHE 575 - Organic Spectroscopy

## Distinction in Biochemistry

The biochemistry B.S. program encourages all of its students to participate in research through its BCM 460 course. For students whose research culminates in a written thesis, it is possible to graduate with Distinction in Biochemistry if the following requirements are met.
First, the student must have a transcript showing an overall cumulative GPA of 3.4, and must also have a minimum cumulative GPA of 3.4 in all natural sciences and mathematics courses taken at S.U.
Second, the student must have taken a minimum of 6 credits of BCM 460 .

Third, before completion of the final semester at Syracuse University, the student must make an oral presentation (either poster or platform) based on his/her research, at one of the following: (1) the Syracuse University biology department Undergraduate Research Conference in April; or (2) an external conference sponsored by an outside (non-S.U.) educational institution with its own accredited 4 -year biochemistry degree program; or (3) an external conference sponsored by a nationally-recognized scientific society with a biochemistry component (e.g. ACS, FASEB, Biophysical Society). A symposium specifically designed for undergraduate researchers from multiple institutions and sponsored by a regional or local chapter of a national scientific society is understood to qualify as external, even if it is physically located at Syracuse University.

Fourth, the student is responsible for selecting the thesis reader from the list of faculty members in the Biochemistry Program and obtaining his/her consent to serve as a reader (see the proposal for a degree with distinction in Biochemistry).

## Additional Information

For further information, contact the biochemistry major advisors.

## Biology, BA

## Undergraduate Programs Director

Scott E. Erdman<br>Room 110 Life Sciences Complex<br>seerdman@syr.edu, 315-443-3748.

## Contact:

Undergraduate Programs Secretary Deborah Herholtz
114 Life Sciences Complex
herholtz@syr.edu, 315-443-9139.

## Faculty

David M. Althoff, John M. Belote, Carlos Castañeda, Samuel H.P. Chan, Heather Coleman, Steve Dorus, Scott E. Erdman, Thomas P. Fondy, Douglas A. Frank, Jason D. Fridley, Jannice Friedman, Anthony Garza, Paul Gold, Sarah Hall, James A. Hewett, Sandra J. Hewett, Donna Korol, Katharine Lewis, Jessica MacDonald, Eleanor Maine, Susan Parks, Melissa Pepling, Scott Pitnick, Ramesh Raina, Surabhi Raina, Mark Ritchie, Kari A. Segraves, Robert Silver, Melody Troeger Sweet, Joseph T. Tupper, Roy Welch, Jason R. Wiles

Students majoring in biology establish a general background in the discipline through a series of first-year/sophomore-level core courses that preview the major sub-disciplines of biology. This introductory program is followed by courses that allow the student to focus on more advanced material.

The major in biology leads to either the B.A. or the B.S. degree. The B.S. degree is intended for students interested in graduate study in biological science or the health professions (medicine, dentistry, or veterinary medicine). In addition to biology requirements, students pursuing the B.S. degree in biology take general and organic chemistry, and mathematics through calculus. Students are also encouraged to gain practical experience and academic credit through the University Honors Program, the Community Internship Program, or departmental research. Students may also receive a B.S. in biology with emphasis on environmental sciences.

The B.A. degree is intended for students who wish to pursue technical or science-related careers that do not require a graduate or professional degree, or careers outside of biology in which a background in science may be useful, such as science writing, business, or law. Although the first-year/sophomore-level core biology course requirements for the B.A. and the B.S. degrees are similar, there are key differences for the B.A. in the first-year courses required and fewer additional courses in chemistry and mathematics are required relative to the B.S.

## Major Requirements

## B.A. Degree Requirements (42-44 credits)

To declare and complete the B.A. major in Biology,
students must:
Earn a C+ or better in a General Biology course (BIO 121 or BIO 123 or accepted AP);

- AND -

Either earn a C+ in one of the four 300-level core courses (BIO 305 , BIO 326 , BIO 327 , BIO 345 ) or have a 3.0 cumulative GPA any time after the first semester.

## Core Curriculum

Students in the B.A. degree program complete the first-year/sophomore core curriculum:

BIO 121 - General Biology I
BIO 123 - General Biology II and
BIO 124 - General Biology II Laboratory
or
in addition to the requirements below, any four credit course above the 300 level that includes a laboratory experience

BIO 305 - Integrative Biology Laboratory
BIO 326 - Genetics
BIO 327 - Cell Biology
BIO 345 - Ecology and Evolution

## Additional Upper-division Courses in Biology

And 12 credits of additional upper-division courses in biology which must include at least one 3-credit laboratory. Students also take two semesters of general (inorganic) chemistry with laboratories (8 credits), and either:
MAT 194 - Precalculus
MAT 285 - Life Sciences Calculus I
or
MAT 221 - Elementary Probability and Statistics I and either

MAT 284 - Business Calculus or
MAT 285 - Life Sciences Calculus I
or
one semester of organic chemistry with lab (5 credits)

## Students with 8 credits of Advanced Placement

Students with 8 credits of Advanced Placement may omit the introductory Biology courses BIO 121 AND BIO 123/BIO 124. Also, students may substitute any 4 credit upper division laboratory course for BIO 123/BIO 124 to fulfill the degree, however when doing so the course substituting cannot also count towards the upper division requirements.

## Biology, BS

## Undergraduate Programs Director

Scott E. Erdman<br>Room 110 Life Sciences Complex<br>seerdman@syr.edu, 315-443-3748.

## Contact:

Undergraduate Programs Secretary Deborah Herholtz
114 Life Sciences Complex
herholtz@syr.edu, 315-443-9139.

## Faculty

David M. Althoff, John M. Belote, Carlos Castañeda, Samuel H.P. Chan, Heather Coleman, Steve Dorus, Scott E. Erdman, Thomas P. Fondy, Douglas A. Frank, Jason D. Fridley, Jannice Friedman, Anthony Garza, Paul Gold, Sarah Hall, James A. Hewett, Sandra J. Hewett, Donna Korol, Katharine Lewis, Jessica MacDonald, Eleanor Maine, Susan Parks, Melissa Pepling, Scott Pitnick, Ramesh Raina, Surabhi Raina, Mark Ritchie, Kari A. Segraves, Robert Silver, Melody Troeger Sweet, Joseph T. Tupper, Roy Welch, Jason R. Wiles

Students majoring in biology establish a general background in the discipline through a series of first-year/sophomore-level core courses that preview the major sub-disciplines of biology. This introductory program is followed by courses that allow the student to focus on more advanced material.

The major in biology leads to either the B.A. or the B.S. degree. The B.S. degree is intended for students interested in graduate study in biological science or the health professions (medicine, dentistry, or veterinary medicine). In addition to biology requirements, students pursuing the B.S. degree in biology take general and organic chemistry, and mathematics through calculus. Students are also encouraged to gain practical experience and academic credit through the University Honors Program, the Community Internship Program, or departmental research. Students may also receive a B.S. in biology with emphasis on environmental sciences.

The B.A. degree is intended for students who wish to pursue technical or science-related careers that do not require a graduate or professional degree, or careers outside of biology in which a background in science may be useful, such as science writing, business, or law. Although the first- year/sophomore-level core biology course requirements for the B.A. and the B.S. degrees are similar, there are key differences for the B.A. in the
first-year courses required and fewer additional courses in chemistry and mathematics are required relative to the B.S.

## Major Requirements

B.S. Degree Requirements (57 to 59 credits)

## Departmental Requirements (38 credits)

Departmental Requirements (38 credits) Students in the B.S. program complete the firstyear/sophomore core curriculum (16 credits) plus an additional 22 credits of upper division coursework in Biology with a minimum of 6 of the 22 credits being laboratory credits. Students may complete these 6 credits through any combination of laboratory courses offered in Biology, except the combinations of BIO 316 Anatomy and Physiology I for Biology Majors and BIO 317 - Anatomy and Physiology II for Biology Majors or BIO 463 - Molecular Biotechnology and BIO 464 - Applied Biotechnology. By petition, laboratory courses with significant biological relevance offered by other departments may also be counted toward the requirement. One upper division elective course must include a significant focus on communication skills experience and at least one upper division elective course must be taken in each of two distribution areas, Ecology/ Evolutionary Biology and Cell/Molecular Biology.

## Core Curriculum

BIO 121 - General Biology I
BIO 305 - Integrative Biology Laboratory
BIO 326 - Genetics
BIO 327 - Cell Biology
BIO 345 - Ecology and Evolution
To Declare and Complete the B.S. Major in Biology

To declare and complete the B.S. major in Biology, students must:

Earn a C+ or better in a General Biology course (BIO 121 or BIO 123 or accepted AP);

- AND -

Either earn a C+ in one of the four 300-level core courses (BIO 305 , BIO 326 , BIO 327 , BIO 345 ) or have a 3.0 cumulative GPA any time after the first semester.

## Non-Departmental Requirements (19-21 credits)

The B.S. degree requires, in addition to completion of the Biology Department requirements, (1) two semesters of general or inorganic chemistry with
laboratory; (2) one semester of organic chemistry with laboratory; (3) and one of the following twocourse sequences in mathematics: two semesters of calculus (MAT 285/MAT 286 or MAT 295/MAT 296) or one semester of calculus (MAT 295) and a 300 - to 500 -level statistics course.

Students intending to enroll in an advanced program in the health professions (e.g., medical school) or a graduate program in biology will also need to take an additional semester in organic chemistry and two semesters of physics.

## Environmental Sciences with B.S. in Biology ( 62 to 66 credits)

Students complete the first-year/sophomore core curriculum in biology (BIO 121, BIO 305, BIO 345), 6 credits of introductory earth science courses, an upper-division laboratory, the senior capstone seminar, plus 24 credits of upperdivision courses, at least 15 of which are in biology; the remainder can be from geography, earth science, and civil engineering. In addition, 17 to 19 credits in cognate sciences and mathematics courses are required. To declare and complete B.S. major in Biology with Environmental Sciences Focus, students must earn grades of C+ or better in the two required core courses for the major - BIO 305 and BIO 345.

## Biophysical Science, BA

Liviu Movileanu
211 Physics Building
314-443-8078
Imovilea@physics.syr.edu

## Faculty

John M. Belote, Mark Bowick, Samuel H.P. Chan, Scott E. Erdman, Martin B. Forstner, Kenneth Foster, Edward D. Lipson, M. Lisa Manning, M. Cristina Marchetti, Alan Middleton, Liviu Movileanu, Ramesh Raina, John M. Russell, Peter Saulson, Eric A. Schiff, Jennifer Schwarz, Roy Welch

The B.A. in biophysical science is designed to serve students with strong interests in physical and mathematical aspects of the life sciences. The signature of the program is an exceptionally broad training in physics, biology, and chemistry. There are excellent scientific and professional opportunities for students who have acquired this broad grounding; bioinformatics, proteomics, and cell signaling are examples of subfields that benefit from a broad background in biophysical science. In conjunction with the other elements of the liberal arts core, graduates of the program are very well prepared to pursue careers in many sectors of the economy. The major is also well suited to students interested in graduate work
in the health professions or in the biophysical sciences.

## B.A. Degree Requirements

The B.A. in biophysical science requires a minimum of 61 credits of classwork, including 55 credits of specified courses. 18 credits of upper-division coursework in biology and physics are required, as are 3 credits of upper-division laboratory work in biology or physics.
BIO 121 - General Biology I
BIO 123 - General Biology II and
BIO 124 - General Biology II Laboratory
PHY 101 - Major Concepts of Physics I and
PHY 102 - Major Concepts of Physics II
CHE 106 - General Chemistry Lecture I and
CHE 107 - General Chemistry Laboratory I
CHE 116 - General Chemistry Lecture II and
CHE 117 - General Chemistry Laboratory II
MAT 285 - Life Sciences Calculus I and
MAT 286 - Life Sciences Calculus II
PHY 211 - General Physics I and
PHY 221 - General Physics Laboratory I
PHY 212 - General Physics II and
PHY 222 - General Physics Laboratory II
CHE 275 - Organic Chemistry I and
CHE 276 - Organic Chemistry I Laboratory
BIO 326 - Genetics and
BIO 327 - Cell Biology
PHY 315 - Biological and Medical Physics
PHY 361 - Introduction to Modern Physics
Upper-division biology electives
Upper-division laboratory elective

## Footnotes

Courses required for medical college admission; students who will apply to medical college must take CHE 325/CHE 326.
CHE 109/CHE 119 and CHE 129/CHE 139, Chemistry for Honors and Majors, may be substituted.
MAT 295, MAT 296, Standard Calculus, may be substituted (8 credits).

PHY 215, PHY 216, Physics for Honors and Majors, may be substituted.

BIO 355, BIO 407, BIO 409, BIO 422, BIO 425 , BIO 462, BIO 463, BIO 465, BIO 475, BIO 501, BIO 503 and BIO 565 are recommended upper-division biology electives.

Three credits of either a biology or a physics upper-division laboratory class, including experimental research, are required; the requirement for 6 elective credits of upper-division biology may be satisfied simultaneously.

## Biotechnology, BS

## Contact:

Ramesh Raina; 464 Life Sciences Complex (315) 443-4546; raraina@syr.edu

## Faculty

David M. Althoff, Rebecca Bader, John M. Belote, Philip N. Borer, Mark S. Braiman, Carlos Castañeda, Arindam Chakraborty, Samuel H.P. Chan, Heather Coleman, Andria Costello Staniec, James C. Dabrowiak, Steve Dorus, Robert P. Doyle, Scott E. Erdman, Thomas P. Fondy, Martin B. Forstner, Jannice Friedman, Anthony Garza, Jeremy L. Gilbert, Paul Gold, Sarah Hall, Julie
M. Hasenwinkel, James H. Henderson, James
A. Hewett, Sandra J. Hewett, Bruce S. Hudson, James Kallmerten, Donna Korol, George M. Langford, Katharine Lewis, Yan-Yeung Luk, Jessica MacDonald, Eleanor Maine, M. Cristina Marchetti, Patrick T. Mather, Mathew M. Maye, Moira A. McDermott, Alexander McKelvie, Jeff Meyer, Liviu Movileanu, Melissa Pepling, Ramesh Raina, Surabhi Raina, Dacheng Ren, Mark Ritchie, Robert Silver, James T. Spencer, Michael B. Sponsler, Melody Troeger Sweet, Nancy I. Totah, Roy Welch, Jason R. Wiles, Weiwei Zheng, Jon Zubieta
Biotechnology is an interdisciplinary program that offers students an opportunity to take courses in biology, environmental sciences, chemistry, engineering, management, public policy and law that will be important for addressing biotechnology-related issues. This program will help students prepare for jobs in areas such as the biotech industry, health professions, pharmaceutical and agricultural industry, environmental conservation and research in academia. The program requires many of the same basic courses as the B.S. degree in Biology, with additional courses in engineering, management and public policy. Additionally, a variety of elective courses in biology, engineering, law, management and public policy can be used to fulfill the major requirements. A senior year capstone class (Biotechnology Seminar) and valuable industry internship are part of this major.

## Total Credits (57-66)

Introductory Biology (4 credits)
BIO 121 - General Biology I (Students with AP credits of Biology with laboratory may omit

## introductory courses)

## Core Courses (9 credits)

BIO 305 - Integrative Biology Laboratory
BIO 326 - Genetics
BIO 327 - Cell Biology

## To Declare and Complete the B.S. in Biotechnology

To declare and complete the B.S. in Biotechnology, students must:

Earn a C+ or better in a General Biology course (BIO 121 or BIO 123 or accepted AP);

- AND -

Either earn a C+ in one of the four 300-level core courses (BIO 305 , BIO 326 , BIO 327 , BIO 345 ) or have a 3.0 cumulative GPA any time after the first semester.

## Upper Division Requirements (Total 29 credits)

## 1. Biotechnology courses (8 credits) <br> BIO 463 - Molecular Biotechnology (4 credits; 3 credits count towards lab) <br> BIO 464 - Applied Biotechnology (4 credits; 3 credits count towards lab)

## 2. Bioengineering/Biomaterial Sciences (3 credits)

BEN 468 - Biomaterials \& Medical Devices

## 3. Public Policy/Management (6 credits)

EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

ECN 301 - Intermediate Microeconomics
Note:
ECN 203 is a prerequisite for ECN 301

## 4. Elective courses (6 credits)

Choose two of the following courses:
ACC 201 - Essentials of Accounting
BEN 541 - Principles of Tissue Engineering
BIO 345 - Ecology and Evolution
BIO 355 - General Physiology
BIO 400 - Selected Topics Evolutionary Developmental Biology
BIO 409 - General Microbiology
BIO 422 - Bioinformatics for Life Scientists

## UNDERGRADUATE COURSE CATALOG

BIO 424 - Comparative Vertebrate Biology
BIO 425 - Cell and Developmental Biology Laboratory
BIO 435 - Genetics Laboratory
BIO 447 - Basic Immunology
BIO 448 - Evolutionary Medicine
BIO 455 - Physiology Lab
BIO 462 - Molecular Genetics
BIO 465 - Molecular Biology Laboratory
BIO 475 - Biochemistry Laboratory
BIO 476 - General Biochemistry II
BIO 501 - Biology of Cancer
BIO 503 - Developmental Biology
BIO 565 - Cellular Physiology
BCM 484 - Biomolecular Modeling
BTC 401 - Molecular Biology Techniques
BPE 420 - Bioseparations
BPE 421 - Bioprocess Kinetics and Systems Engineering

BPE 440 - Bioprocess and Systems Laboratory
BPE 481 - Bioprocess Engineering Design
CHE 412 - Metals in Medicine
CHE 477 - Proteins and Nucleic Acids Lab
CIE 472 - Applied Env Microbiology
ECN 355 - Economics of Health and Medical Care
GEO 400 - Selected Topics Food: A Critical Geography
LPP 255 - Introduction to the Legal System
MAR 301 - Essentials of Marketing for NonManagement Students

PAF 410 - Practicum in Public Policy
PAF 451 - Environmental Policy
PHI 393 - Contemporary Ethics
PSC 318 - Technology, Politics, and Environment
PAF 315 - Methods of Public Policy Analysis and Presentation

## Elective Courses by Petitioning to the

 Biology DepartmentIn addition, other courses related to biotechnology from other departments (for example, Chemistry, Bioengineering, Physics, Psychology, Biomaterial Institute, Maxwell School, Law School, Whitman School, ESF and Upstate Medical University) can be used as elective courses by petitioning to the Biology Department.

Senior Capstone Seminar Course BIO 421 - Seminar in Biology

## Internship/Independent Research

This requirement can be fulfilled by a) completing an approved internship at a biotech-related company during spring and/or fall semester of junior or senior year or b) by completed an approved independent research in any of the biotech-related topics, including biology, chemistry, engineering, public policy, law or management. For example, if a student chooses to do independent research in biology, $\mathrm{s} / \mathrm{he}$ can register for 3 credits of BIO 460 each semester. In addition, an approved internship at a biotechrelated company over the summer after the junior year can be petitioned to fulfill this requirement.
BIO 460 - Research in Biology

## Math and Chemistry Requirements (19-21 credits)

CHE 106 - General Chemistry Lecture I and
CHE 107 - General Chemistry Laboratory I
CHE 116 - General Chemistry Lecture II and
CHE 117 - General Chemistry Laboratory II
CHE 275 - Organic Chemistry I and
CHE 276-Organic Chemistry I Laboratory
MAT 285 - Life Sciences Calculus I * and
MAT 286 - Life Sciences Calculus II *
or
MAT 295 - Calculus I * (8 credit hours total) and MAT 296 - Calculus II * (8 credit hours total)
or
MAT 285 - Life Sciences Calculus I * (6-7 credit hours total) or
MAT 295 - Calculus I * (6-7 credit hours total)

## Distinction in Biotechnology

Students may earn a B.S. in Biotechnology degree with Distinction by meeting the following requirements:

An overall cumulative GPA of 3.4, and must also have a minimum cumulative GPA of 3.4 in courses taken to satisfy the Biotechnology major at S.U.

The student must have taken a minimum of 6 credits of BIO 460 - Research in Biology and four semesters of BIO 419 - Junior and Senior Thesis Seminar, plus BIO 495 - Distinction Thesis in Biology.
Before completion of the final semester at Syracuse University, the student must make a presentation (either poster or oral) based on his/her research.

The student must also complete a written thesis judged to be of high quality

## Chemistry, BA

## Chair:

Jon Zubieta, 1-014 Center for Science and Technology, 315-443-4109, jazubiet@syr.edu

## Faculty

Philip N. Borer, Mark S. Braiman, Carlos Castañeda, Joseph Chaiken, Arindam Chakraborty, John D. Chisholm, Daniel Clark, James C. Dabrowiak, Robert P. Doyle, James Hougland, Bruce S. Hudson, Tara Kahan, James Kallmerten, Ivan V. Korendovych, Timothy M. Korter, Yan-Yeung Luk, Mathew M. Maye, Karin Ruhlandt, James T. Spencer, Michael B. Sponsler, Nancy I. Totah, Weiwei Zheng, Jon Zubieta
Chemistry, the science concerned with the composition, structure, properties, and reactions of matter, especially of atomic, elemental, and molecular systems, is taught through courses in analytical, biological, inorganic, organic, and physical chemistry and through direct participation in original research.
Undergraduate majors in chemistry may elect one of three programs, two leading to a B.A. degree, with an emphasis in either chemistry or biological chemistry, and one to the B.S. degree. Either B.A. degree program requires fewer credits in chemistry than the B.S. option, and yet provides a foundation in the discipline adequate for either immediate professional engagements or for graduate studies. Students studying for a B.S. degree in chemistry gain a more extensive background as they fulfill a broader range of requirements; they must file a petition with the department chair indicating their intent to secure the B.S. degree before it can be awarded.
Students interested in a B.S. degree in biochemistry should see the biochemistry section here.
For information about certification to teach chemistry at the secondary school level, see Education/Arts and Sciences (dual program) in this section of the catalog.

## B.A. Degree Requirements

## (Chemistry Track)

Requirements include 36 credits in chemistry core courses, 32 of which are taken in specific courses. Each student's course of study includes the following:

Group 1
CHE 106 - General Chemistry Lecture I and
CHE 116 - General Chemistry Lecture II
or
CHE 109 - General Chemistry Lecture I (Honors and Majors) and

CHE 119 - General Chemistry Lecture II (Honors and Majors)

CHE 107 - General Chemistry Laboratory I and
CHE 117 - General Chemistry Laboratory II or

CHE 129 - General Chemistry Laboratory I (Honors and Majors) and
CHE 139 - General Chemistry Laboratory II (Honors and Majors)

CHE 275-Organic Chemistry I
CHE 276-Organic Chemistry I Laboratory
CHE 325 - Organic Chemistry II
CHE 326 - Organic Chemistry II Laboratory
CHE 346 - Physical Chemistry
CHE 347 - Physical-Analytical Chem Lab
CHE 356 - Physical Chemistry
CHE 357 - Physical Chemistry Laboratory
CHE 335 - Chemical and Biochemical Analysis with Laboratory or

CHE 444 - Forensic Chemical Analysis

## Group 2

At least 4 credits chosen from
CHE 411 - Inorganic Chemistry
CHE 422 - Inorganic Laboratory Technique
CHE 427 - Organic Chemistry of Biological Molecules

CHE 436 - Advanced Physical Chemistry
CHE 467 - Introduction to Physical Chemistry Research Laboratory

CHE 546 - Molecular Spectroscopy and Structure
CHE 575-Organic Spectroscopy
selected graduate courses with the instructor's approval

Group 3
One year of calculus and physics
MAT 285 - Life Sciences Calculus I and
MAT 286 - Life Sciences Calculus II
or
MAT 295 - Calculus I and
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 212 - General Physics II
PHY 221 - General Physics Laboratory I

PHY 222 - General Physics Laboratory II

## Additional Information

Students are encouraged to gain some research experience by enrolling in CHE 450 , which may be substituted for a 3 -credit course listed in (2) above by petitioning the department.

## (Biological Chemistry Track)

Requirements include 21 credits from chemistry core courses, 6 credits from the list, (2) below, of approved biology/biochemistry core courses, and 9 additional credits from an approved list for a total of 36 required credits. Each student's course of study must include the following:

## Group 1

CHE 106 - General Chemistry Lecture I and
CHE 116 - General Chemistry Lecture II
or
CHE 109 - General Chemistry Lecture I (Honors and Majors) and
CHE 119 - General Chemistry Lecture II (Honors and Majors)

CHE 107 - General Chemistry Laboratory I and
CHE 117 - General Chemistry Laboratory II or

CHE 129 - General Chemistry Laboratory I (Honors and Majors) and
CHE 139 - General Chemistry Laboratory II (Honors and Majors)
CHE 275 - Organic Chemistry I
CHE 276-Organic Chemistry I Laboratory
CHE 325 - Organic Chemistry II
CHE 326-Organic Chemistry II Laboratory
CHE 474 - Structural and Physical Biochemistry

## Group 2

BIO 475 - Biochemistry Laboratory or
CHE 477 - Proteins and Nucleic Acids Lab and
BCM 475 - Biochemistry I

## Group 3

At least 9 credits chosen from
CHE 335 - Chemical and Biochemical Analysis with Laboratory

CHE 411 - Inorganic Chemistry
CHE 412 - Metals in Medicine
CHE 422 - Inorganic Laboratory Technique
CHE 427 - Organic Chemistry of Biological Molecules

CHE 436 - Advanced Physical Chemistry
CHE 467 - Introduction to Physical Chemistry Research Laboratory
CHE 546 - Molecular Spectroscopy and Structure
CHE 575-Organic Spectroscopy
CHE 444 - Forensic Chemical Analysis
selected graduate courses with the instructor's approval

## Group 4

One year of calculus and physics
MAT 285 - Life Sciences Calculus I and
MAT 286 - Life Sciences Calculus II
or
MAT 295 - Calculus I and
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 212 - General Physics II
PHY 221 - General Physics Laboratory I
PHY 222 - General Physics Laboratory II

## Additional Information

Students are strongly encouraged to take BIO 326

- Genetics and BIO 327 - Cell Biology. Students are also encouraged to take BIO 465 - Molecular Biology Laboratory.

Students may also gain some research experience by enrolling in CHE 450 , which may be substituted for a 3-credit course listed in (3) above, by petitioning the department.

## Degree with Distinction

Distinction in Chemistry is awarded by the chemistry department upon completion of the chemistry major and a high-quality chemistry thesis. The thesis will be evaluated and judged by a committee consisting of the research advisor and two other chemistry faculty members. Other requirements include a minimum cumulative GPA of 3.4 by the end of the senior year, and a minimum cumulative GPA of 3.4 in chemistry department courses. See Professor Totah for additional requirements.

## Chemistry, BS

## Chair:

Jon Zubieta, 1-014 Center for Science and Technology, 315-443-4109, jazubiet@syr.edu

## Faculty

Philip N. Borer, Mark S. Braiman, Carlos

Castañeda, Joseph Chaiken, Arindam Chakraborty, John D. Chisholm, Daniel Clark, James C. Dabrowiak, Robert P. Doyle, James Hougland, Bruce S. Hudson, Tara Kahan, James Kallmerten, Ivan V. Korendovych, Timothy M. Korter, Yan-Yeung Luk, Mathew M. Maye, Karin Ruhlandt, James T. Spencer, Michael B. Sponsler, Nancy I. Totah, Weiwei Zheng, Jon Zubieta
Chemistry, the science concerned with the composition, structure, properties, and reactions of matter, especially of atomic, elemental, and molecular systems, is taught through courses in analytical, biological, inorganic, organic, and physical chemistry and through direct participation in original research.
Undergraduate majors in chemistry may elect one of three programs, two leading to a B.A. degree, with an emphasis in either chemistry or biological chemistry, and one to the B.S. degree. Either B.A. degree program requires fewer credits in chemistry than the B.S. option, and yet provides a foundation in the discipline adequate for either immediate professional engagements or for graduate studies. Students studying for a B.S. degree in chemistry gain a more extensive background as they fulfill a broader range of requirements; they must file a petition with the department chair indicating their intent to secure the B.S. degree before it can be awarded.
Students interested in a B.S. degree in biochemistry should see the biochemistry section here.
For information about certification to teach chemistry at the secondary school level, see Education/Arts and Sciences (dual program) in this section of the catalog.

## B.S. Degree Requirements

At least 45 credits in chemistry are required for the B.S. degree. Each student's course of study should include the following:

## Group 1

CHE 106 - General Chemistry Lecture I and
CHE 116 - General Chemistry Lecture II
or
CHE 109 - General Chemistry Lecture I (Honors and Majors) and

CHE 119 - General Chemistry Lecture II (Honors and Majors)

CHE 107 - General Chemistry Laboratory I and
CHE 117 - General Chemistry Laboratory II
or
CHE 129 - General Chemistry Laboratory I (Honors and Majors) and
CHE 139 - General Chemistry Laboratory II
(Honors and Majors)
CHE 275-Organic Chemistry I
CHE 276 - Organic Chemistry I Laboratory
CHE 325 - Organic Chemistry II
CHE 326-Organic Chemistry II Laboratory
CHE 346 - Physical Chemistry
CHE 347 - Physical-Analytical Chem Lab
CHE 356 - Physical Chemistry
CHE 357 - Physical Chemistry Laboratory
CHE 411 - Inorganic Chemistry
CHE 422 - Inorganic Laboratory Technique
CHE 450 - Introduction to Chemical Research (at least 3 credits)

CHE 335 - Chemical and Biochemical Analysis with Laboratory or

CHE 444 - Forensic Chemical Analysis
CHE 474 - Structural and Physical Biochemistry or BCM 475 - Biochemistry I

## Group 2

At least 3 credits in a lecture course chosen from
CHE 427-Organic Chemistry of Biological Molecules
CHE 436 - Advanced Physical Chemistry
CHE 546 - Molecular Spectroscopy and Structure
CHE 575-Organic Spectroscopy
selected graduate courses with the instructor's approval

## Group 3

One year of calculus and physics
MAT 295 - Calculus I and
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 212 - General Physics II
PHY 221 - General Physics Laboratory I
PHY 222 - General Physics Laboratory II

## Additional Information

If taken in an appropriate area of research, additional credit in CHE 450 beyond the 3 credits required in (1) above may be substituted for up to 4 laboratory credits with the department's approval.

## B.S. Degree Requirements: Medicinal Chemistry Track

At least 37 credits in chemistry are required for the B.S. degree with the Medicinal Chemistry

Track. Each student's course of study should include the following:

## At least 37 credits in Chemistry:

CHE 106 - General Chemistry Lecture I and
CHE 116 - General Chemistry Lecture II
or
CHE 109 - General Chemistry Lecture I (Honors and Majors) and
CHE 119 - General Chemistry Lecture II (Honors and Majors)

CHE 107 - General Chemistry Laboratory I and CHE 117 - General Chemistry Laboratory II or

CHE 129-General Chemistry Laboratory I
(Honors and Majors) and
CHE 139 - General Chemistry Laboratory II (Honors and Majors)

CHE 275 - Organic Chemistry I
CHE 276 - Organic Chemistry I Laboratory
CHE 325 - Organic Chemistry II
CHE 326-Organic Chemistry II Laboratory
CHE 335 - Chemical and Biochemical Analysis with Laboratory
CHE 412 - Metals in Medicine
CHE 414 - Introduction to Medicinal Chemistry
CHE 427-Organic Chemistry of Biological Molecules

CHE 450 - Introduction to Chemical Research (at least 3 credits)

CHE 474 - Structural and Physical Biochemistry

## At least 7 credits in Biology:

BIO 121 - General Biology I
BIO 305 - Integrative Biology Laboratory

## At least 3 credits in elective

 courses selected from:CHE 346 - Physical Chemistry
CHE 356 - Physical Chemistry
CHE 411 - Inorganic Chemistry
CHE 477 - Proteins and Nucleic Acids Lab
CHE 546 - Molecular Spectroscopy and Structure
CHE 575-Organic Spectroscopy
BCM 475 - Biochemistry I
BCM 476 - Biochemistry II
BCM 484 - Biomolecular Modeling
BEN 433 - Drug Delivery

BIO 409 - General Microbiology
BIO 422 - Bioinformatics for Life Scientists
BIO 447 - Basic Immunology
BIO 462 - Molecular Genetics
BIO 463 - Molecular Biotechnology
BIO 464 - Applied Biotechnology
BIO 465 - Molecular Biology Laboratory
BIO 501 - Biology of Cancer
FSC 453 - Forensic Toxicology

## One year of calculus:

MAT 285 - Life Sciences Calculus I and
MAT 286 - Life Sciences Calculus II
or
MAT 295 - Calculus I and
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 212 - General Physics II
PHY 221 - General Physics Laboratory I
PHY 222 - General Physics Laboratory II
If taken in an appropriate area of research, additional credit in CHE 450 beyond the 3 credits required in (1) above may be substituted for up to 4 laboratory credits with the department's approval.

Students who receive a score of 5 on the AP chemistry exam will receive credit for CHE 106/116 and CHE 107/117 (8 credits)*
*Pre-medical students should consult with Health Professions Advising before accepting AP chemistry credit.

## Degree with Distinction

Distinction in Chemistry is awarded by the chemistry department upon completion of the chemistry major and a high-quality chemistry thesis. The thesis will be evaluated and judged by a committee consisting of the research advisor and two other chemistry faculty members. Other requirements include a minimum cumulative GPA of 3.4 by the end of the senior year, and a minimum cumulative GPA of 3.4 in chemistry department courses. See Professor Totah for additional requirements.

## Citizenship \& Civic Engagement, BA

Paul Hagenloh, Director
phagenlo@syr.edu
314-443-2210
145 Eggers

## Faculty

John Burdick, William D. Coplin, Carol Faulkner, Paul M. Hagenloh, Mary E. Lovely, Amy Lutz, Anne Mosher, Grant D. Reeher, Junko Takeda, Peter J. Wilcoxen

The Maxwell Program in Citizenship and Civic Engagement is an individually customized interdisciplinary plan of study for students who wish to connect the disciplinary focus of one of the traditional Maxwell/College of Arts and Sciences undergraduate degrees in the social sciences with the Maxwell tradition of dedication to persistent, committed involvement in the local, national, and international communities in which we live.

The program entails two majors: 1) one major chosen from the existing social-science disciplines within Maxwell (Anthropology, Economics, Geography, History, International Relations, Political Science, Policy Studies, and Sociology) or a related discipline outside of Maxwell that entails a substantial social-science focus; and 2) the Citizenship and Civic Engagement major, constructed by the student and his or her faculty advisors in a manner that brings the disciplinary tools gained in pursuit of the social-sciences major to bear on questions of citizenship, civic engagement, and public affairs. The program thus integrates for its students two of the great strengths of the Maxwell School-excellence in the social sciences and a dedication to the public good-and provides pathways for producing direct, meaningful connections between knowledge and action.

The Program begins with a sequence of lower- and upper-division courses, which coordinates the experiences of students in the various disciplinary majors and directs them towards the defining requirement of the major: the senior-level Action Plan Workshop, in which students design and implement, as much as possible, a concrete strategy for addressing an issue of local, national, or international concern. The Action Plan will rely on the training received in the student's socialscience discipline, but it will not be a traditional academic thesis; rather, the goal will be to study, understand, and act on an issue deemed important by the student herself. The Program requires thirty-one credit hours of coursework, in addition to the requirements for the separate social science or other majors; some of these courses will fulfill other Arts and Sciences and departmental requirements at the same time.

## Program Requirements

The Program requires thirty-one credit hours of coursework, outlined below, in addition to the completion of a concurrent major chosen from the existing social-science disciplines within Maxwell (Anthropology, Economics, Geography, History,

International Relations, Political Science, Policy Studies, and Sociology) or a related discipline outside of Maxwell that entails a substantial social-science focus.

The program has two entry points: the beginning of a student's first year at Syracuse University, and the beginning of the second.
The first-year entry point allows prospective high-school seniors to apply to the Program at the same time they apply to Syracuse University; those accepted will enter the Program upon matriculation. They will also benefit from a robust schedule of social and academic events that are designed to build a sense of esprit de corps among the cohort.
Students already at Syracuse University may apply for admission to the program at the end of the first year, for matriculation at the beginning of the second. The Program Board will recruit students from the intro-level courses in Maxwell departments and related departments across campus, as well as from MAX 123 and MAX 132. First-year Foundations requirements (outlined below) are not waived for students entering in their second year; students who wish to apply to the Program in their first year at Syracuse University must complete those requirements before they may begin the program.

Successful completion of a concurrent major, in one of the existing Maxwell undergraduate programs or in a suitably related discipline, is a requirement for graduation in the Maxwell Program in Citizenship and Civic Engagement; declaration of that major it is not a requirement for entry into the program.
All students complete the Liberal Arts Core requirements. Under the guidance of faculty mentors and the Program's board, Core courses should be selected to provide the broadest possible methodological foundation for a student's particular interests in civic engagement.

All students must complete a lower-division foundation sequence, an upper-division sequence, and a "connective coursework" sequence, as follows:

## Lower Division Experience

## First-year Foundations (six credit

hours):
Either MAX 123 - Critical Issues for the United States ., or MAX 132 - Global Community; plus one additional entry-level course (200-level or below) in any Maxwell department.
A student may take both MAX 123 and MAX 132 to fulfill this requirement.
This requirement must be completed during a student's first (freshman) year at Syracuse University.

Social-Science Methodology (six credit hours):
MAX 201 - Quantitative Methods for the Social Sciences

One additional course on methodology, selected from the following list:
ANT 453 - Poverty, Policy, and Human Services
ANT 481 - Ethnographic Techniques
ANT 482 - Life Histories/Narratives
ANT 484 - Social Movement Research Methods
GEO 381 - Cartographic Design
GEO 383 - Geographic Information Systems
GEO 386 - Quantitative Geographic Analysis
GEO 482 - Environmental Remote Sensing
HST 201 - Research Seminar in History (topic varies)

HST 401 - Senior Seminar (topic varies)
PAF 315 - Methods of Public Policy Analysis and Presentation
PSC 202 - Introduction to Political Analysis
SOC 318 - Introduction to Research
SOC 319-Qualitative Methods in Sociology

## Upper-Division Sequence

Students take each of three new courses, all designed specifically for the Program, in the sophomore, junior, and senior years (ten credit hours):

MAX 301 - Ethics, Justice, and Citizenship
Seminar in Ethics and Political/Social Justice
Seminar in ethics and political/social justice as they pertain to citizenship and civic action. Course covers historical and contemporary approaches to citizenship; contains substantial research and service-learning components.
MAX 302 - Civic Engagement Research Semina

## Readings and Research on <br> Application of Social-science Methodologies

Readings and research on application of socialscience methodologies to concrete civic, political, and global issues. Initial focus on Maxwell-based research; case studies of academically informed civic engagement; final project proposal on topic of student's choice.
MAX 401 - Action Plan Workshop (three credit hours)

## Capstone course for Maxwell Citizenship/Civic Engagement Program

Capstone course for Maxwell Citizenship/Civic Engagement Program. Design and implementation of "Action Plan" to improve social, economic and/ or political conditions at the local, state, federal or global level.
All of these courses are offered in both spring and fall semesters, to accommodate student schedules and especially those students who study abroad in one or more semesters.

## Connective Coursework

Students enroll in three upper-division courses (nine credit hours) clearly related to the design and execution of the final Action Plan. Courses are selected with the help of the student's faculty advisor and approved by the Program's Advisory Board. The courses must come from at least two different academic departments or units within Maxwell; one of the courses may be taken from any unit in the University. These courses should be selected to provide a broad substantive background for a student's Action Plan; students will be encouraged to integrate into their studies civically engaged research from outside the Maxwell School.

## Concurrent Major

The structure of the Maxwell Program in Citizenship and Civic Engagement is based on the premise that the senior-level Action Plan will require and apply the research skills gained in pursuit of an undergraduate degree in the social sciences.
All students, therefore, must complete, in addition to the requirements for the Maxwell Program in Citizenship and Civic Engagement outlined above, a concurrent major chosen from the existing social-science disciplines within Maxwell (Anthropology, Economics, Geography, History, International Relations, Political Science, Policy Studies, and Sociology) or a related discipline outside of Maxwell that entails a substantial social-science focus.
Students singly enrolled in the College of Arts and Sciences choose the concurrent major from the existing social-science disciplines within Maxwell, or from suitably related disciplines in the College of Arts and Sciences.
Students enrolled in the College of Arts and Sciences dual programs with S.I. Newhouse School of Public Communications or the School of Education, or students enrolled in other schools/ colleges in majors not directly related to the social sciences, may apply for a dual or double major, respectively, in Citizenship and Civic Engagement if their intended course of study and goals for
academically informed civic engagement fit with the structure and capacities of the Program. In such cases, the Program's Director and Board will ensure that the student's program of study provides sufficient background in the social sciences to complete the Action Plan.

## Classical Civilization, BA

## Contact:

Jeffrey S. Carnes, jscarnes@syr.edu
332 H.B. Crouse, 315-443-2068

## Faculty

Jeffrey S. Carnes, Matthieu H. van der Meer

## Why Study Classics?

The past is a foreign country; they do things differently there.

## L.P. Hartley

Students approaching Classical Studies for the first time may wonder how the study of languages and cultures from antiquity is relevant in the digital era; why study Classics?
First, Classics provides students with many fascinating intellectual opportunities. Because the range of Greek and Latin literature is so diverse, students interested in history, drama, poetry, political science, or philosophy, will find ample material to stimulate their curiosity. Moreover, students will develop the ability to read some of the most influential works of western literature in their original languages, and learn about cultures that are radically different from our own, yet at the same time provide the foundation of many modern ideas and institutions.
Since Classical Studies have traditionally played a central role in education they have left an indelible mark on the intellectual, political, and artistic development of Western Civilization. Countless authors, as diverse in time and place as Dante and Derek Walcott, have looked for inspiration to the classical tradition; political theorists and statesmen, including Thomas Jefferson and Alexander Hamilton, developed their political ideals through a close reading of ancient historians such as Polybius and Thucydides. Understanding the reception of classical texts and the ways subsequent generations adapted and modified classical ideals will grant students a greater degree of proficiency in civic and cultural history, and help them better understand the cultural politics of their own world.
While not all Classics students wish to become classical scholars, a major in Classics is among the most impressive degrees to have when applying for a job in other fields. The work
ethic required for success in the languages, the intellectually challenging nature of the grammar and syntax of Greek and Latin, and the interdisciplinary nature of the field are only a few reasons why Classics majors are highly respected and sought-after job candidates. Furthermore, because of the historical role of Classics in education many terms and concepts in various fields are derived from Greek or Latin. For these reasons, Classics majors often find employment in Law, Medical Sciences, Government/Politics, Writing and Journalism, and Education.
Why study Classics? To find a challenging and immensely rewarding field of study, and to explore the familiar yet foreign country that is our past.

## Major Requirements

The Major in Classical Civilization requires 27 credits chosen from the following list of courses. No more than 9 credits may be selected from any one subject, and no more than 18 credits may be selected from any one department. At least 18 credits must come from courses numbered 300 and above; in addition, at least two courses must come from the courses taught within the Classics program (those with the prefixes LAT, GRE, and LIT). Other courses related to the ancient world may be substituted with the approval of the program director.

## Greek

GRE 101 - Ancient Greek I
GRE 102 - Ancient Greek II
GRE 201 - Ancient Greek III
GRE 310 - Greek Prose Authors
GRE 320 - Readings from Greek Poets
GRE 410 - Advanced Greek Prose
GRE 420 - Advanced Greek Poetry
Latin
LAT 101 - Latin I
LAT 102 - Latin II
LAT 201 - Latin III
LAT 310 - Latin Prose Authors
LAT 320 - Latin Poets
LAT 410 - Advanced Latin Prose
LAT 420 - Advanced Latin Poetry

## LIT (Literature in Translation)

LIT 101 - Introduction to Classical Literature (Greek)
LIT 102 - Introduction to Classical Literature (Latin)
LIT 203 - Greek and Roman Epic in English

Translation
LIT 211 - Greek and Roman Drama in English Translation

LIT 300 - Selected Topics A Greek Odyssey (offered in Florence)
LIT 421 - Classical Mythology (offered in Florence)

## Anthropology

ANT 141 - Introduction to Archaeology and Prehistory
ANT 145 - Introduction to Historical Archaeology
ANT 346 - Gender Through the Ages
ANT 348 - History of Archaeology

## History

HST 210 - The Ancient World
HST 310 - The Early Middle Ages
HST 352 - History of Ancient Greece
HST 353 - History of Ancient Rome
HST 401 - Senior Seminar Roman Imperialism
HST 401 - Senior Seminar Herodotus and the Persian Wars

## History of Art

HOA 105 - Arts and Ideas I
HOA 301 - Origins of Western Art
HOA 302 - Greek Art and Architecture
HOA 303 - Etruscans and Romans: Ancient Art and Society in Italy (offered in Florence)
HOA 304 - Roman Art \& Architecture

## Linguistics

LIN 201 - The Nature and Study of Language
LIN 202 - Languages of the World

## Philosophy

PHI 111 - Plato's Republic
PHI 307 - Ancient Philosophy
PHI 415 - Roots of Western Civilization (offered in Madrid)

## Religion

REL 205 - Ancient Greek Religion
REL 206 - Greco-Roman Religion
REL 217 - The New Testament
REL 294 - Mythologies
REL 309 - Early Christianities
REL 421 - Classical Mythology (offered in Florence)

## Classics, BA

## Contact:

Jeffrey S. Carnes, jscarnes@syr.edu
332 H.B. Crouse, 315-443-2068
Why Study Classics?
The past is a foreign country; they do things differently there.

## L.P. Hartley

Students approaching Classical Studies for the first time may wonder how the study of languages and cultures from antiquity is relevant in the digital era; why study Classics?

First, Classics provides students with many fascinating intellectual opportunities. Because the range of Greek and Latin literature is so diverse, students interested in history, drama, poetry, political science, or philosophy, will find ample material to stimulate their curiosity. Moreover, students will develop the ability to read some of the most influential works of western literature in their original languages, and learn about cultures that are radically different from our own, yet at the same time provide the foundation of many modern ideas and institutions.
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While not all Classics students wish to become classical scholars, a major in Classics is among the most impressive degrees to have when applying for a job in other fields. The work ethic required for success in the languages, the intellectually challenging nature of the grammar and syntax of Greek and Latin, and the interdisciplinary nature of the field are only a few reasons why Classics majors are highly respected and sought-after job candidates. Furthermore, because of the historical role of Classics in education many terms and concepts in various fields are derived from Greek or Latin. For these reasons, Classics majors often find employment in Law, Medical Sciences, Government/Politics, Writing and Journalism, and Education.

Why study Classics? To find a challenging and immensely rewarding field of study, and to explore the familiar yet foreign country that is our past.

## Major Requirements:

## Greek Emphasis

The Major in Classics with Greek Emphasis consists of 27 credits in Greek, with at least 18 credits coming from courses numbered 300 and above. Courses in Latin numbered 300 and above may be substituted up to a total of 6 credits. Courses from the approved list for Classical Civilization may be substituted up to a total of 6 credits with the approval of the Director.

## Latin Emphasis

The Major in Classics with Latin Emphasis consists of 27 credits in Latin, with at least 18 credits coming from courses numbered 300 and above. Courses in Greek may be substituted up to a total of 9 credits. Courses from the approved list for Classical Civilization may be substituted up to a total of 6 credits with the approval of the Director.

## Communication Sciences and Disorders, BS

## Chair:

Karen A. Doherty, Ph.D.
621 Skytop Road
Suite 1200
315-443-9637

## Contact:

csd@syr.edu

## Faculty

Karen Doherty, Kimberly Lamparelli, Soren Lowell, Linda Milosky, Joseph Pellegrino, Jonathan Preston, Beth Prieve, Ellyn Riley, Victoria Tumanova and Kathy Vander Werff, plus adjunct instructor, Bonnie Hulslander, and Emeritus Professors, Mary Louise Edwards and Raymond Colton

The program in communication sciences and disorders provides students with a broad education in human communication sciences and disorders. Students may participate in clinical experiences in the Gebbie Speech-LanguageHearing Clinics. The program prepares students for graduate study in speech language pathology and audiology and other related fields in health, education, and science. Interested students have the opportunity to participate in research in faculty laboratories.
pathology, and a clinical doctoral degree (Au.D.) is required to practice audiology. Minimally, a student will need a 3.0 GPA to be considered for these graduate programs. Many graduate programs require a higher GPA.

## Degree Awarded:

Bachelor of Science in Communication Sciences \& Disorders

## Total Credits required:

 120
## Prerequisites for admission into the major:

Students interested in this major should contact the Department of Communication Sciences and Disorders at csd@syr.edu as early as possible. Students are formally admitted to the major after consulting a department advisor on a plan of study and successfully completing CSD 212 with a B or better, or by petition.
A master's degree is required to practice speech pathology, and a clinical doctoral degree (Au.D.) is required to practice audiology. Minimally, a student will need a 3.0 GPA to be considered for these graduate programs. Many programs require a higher GPA.

## Major Requirements

The B.S. in Communication Sciences and Disorders requires students to fulfill the quantitative skills requirement for the liberal arts core and to complete 34 credits in CSD courses, plus 12-13 non-CSD credits that can also be counted towards the Liberal Arts Core, as outlined below. (Total 46-47 credits)

## Introductory Course (3 credits)

CSD 212 - Introduction to Communication Sciences and Disorders

Normal Processes (18 credits)
CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms
CSD 325 - Fundamentals of Hearing Sciences
CSD 345 - Speech Science
CSD 316 - Introduction to Applied Phonetics
CSD 409-Cognitive Neuroscience of Speech and Language
CSD 422 - Development of Speech and Language

## Disorders (7 credits)

CSD 450 - Clinical/Classroom Practicum
CSD 429 - Basic Clinical Audiology
CSD 451 - Clinical Methods in Speech-Language Pathology

## CSD Electives (6 credits)

Non-departmental requirements:
A minimum of 3 credits in behavioral sciences
PSY 205 - Foundations of Human Behavior
PSY 209 - Foundations of Human Behavior/ Honors Section
PSY 274 - Social Psychology
PSY 335 - Psychology of Childhood
PSY 336 - Psychology of the Adolescent
PSY 337 - Psychology of Adult Life: Maturity and Old Age
SOC 101 - Introduction to Sociology
SOC 102 - Social Problems
SOC 248 - Ethnic Inequalities and Intergroup Relations

SOC 281 - Sociology of Families
SOC 364 - Aging and Society
ANT 111 - Introduction to Cultural Anthropology
ANT 121 - Peoples and Cultures of the World
Other courses may meet this requirement with approval.
A minimum of 3 credits of biological science
BIO 121 - General Biology I or
BIO 211 - Introduction to Neuroscience or equivalent
3-4 credits of physical science
CHE 106 - General Chemistry Lecture I
CHE 107 - General Chemistry Laboratory I
PHY 101 - Major Concepts of Physics I or
PHY 211 - General Physics I
or equivalent
A minimum of 3 credits of statistics
MAT 221 - Elementary Probability and Statistics I
PSY 252 - Statistical Methods II
preferred

## Earth Sciences, BA

Donald Siegel, Chair
204 Heroy Geology Laboratory,
315-443-2672.

## Faculty

Suzanne L. Baldwin, Marion E. Bickford, Paul G. Fitzgerald, Gregory D. Hoke, Linda C. Ivany, Christopher Junium, Jeffrey A. Karson, Laura K. Lautz, Zunli Lu, Robert Moucha, Cathryn R. Newton, Scott D. Samson, Christopher A. Scholz, Donald I. Siegel, Bruce H. Wilkinson

The Earth Sciences provide insights into some of humanity's deepest questions. How was the planet Earth, our lifeboat in space, formed? What are the processes that have shaped the Earth its surface and internal structure? How has life, of which humanity is a part, evolved? Why are there earthquakes, volcanoes, mountain chains, continents, and oceans? How has the surface of the Earth changed through time? On a practical level, the study of Earth Sciences provides a basis for understanding natural hazards, assessing Earth's climate variability and global change, predicting the migration of man-made pollutants, and exploring for the energy and mineral resources upon which society depends. The study of Earth Sciences also, uniquely, provides a perspective of time and an appreciation of the natural world that can enrich a lifetime.

The Department of Earth Sciences offers bachelor of science and bachelor of arts degrees. The bachelor of science degree is recommended for students intending to pursue a career in the Earth Sciences-either professionally or in academia. Most bachelor of science students continue on to graduate school to obtain a master's degree, the standard entry-level professional degree in the Earth sciences, or a Ph.D. if they intend to pursue a career in academia. Two bachelor of science degree tracks are offered within the department, the B.S. in Earth Sciences, and the B.S. in Earth Sciences with focus in environmental science. The B.S. in Earth Sciences provides a strong background in basic science and geology, and through appropriate choice of electives can be tailored to meet a wide range of possible interests within the Earth Sciences. The B.S. in Earth Sciences with focus in environmental science is offered jointly with the biology department, and is recommended for those students specifically intending to pursue a career in the environmental arena.

The bachelor of arts degree in Earth Sciences is recommended for those students who enjoy and are intellectually intrigued by the Earth Sciences, but intend to pursue careers in other fields. The B.A. degree differs from the B.S. degree in that it requires fewer ancillary science courses and fewer electives from within the department. Along with intellectual enrichment, the B.A. degree provides a rounded science foundation and critical thinking skills that can be applied to numerous other fields. Graduates with B.A.s in Earth Sciences go on to be lawyers, teachers, business people, environmental planners, public policy makers, and
politicians, as well as geologists.

## Requirements for a B.A. Degree in Earth Sciences

Introductory Course (one of the following):

EAR 110 - Dynamic Earth
EAR 203 - Earth System Science
EAR 105 - Earth Science and
EAR 104 - Introductory Geology Lab

## One of the following sequence courses:

EAR 210 - History of Earth and Life
EAR 106 - Geohazards \& Natural Disasters
EAR 111 - Climate Change Past and Present
EAR 117-Oceanography
EAR 200 - Selected Topics
EAR 205 - Water and Our Environment
EAR 225 - Volcanoes and Earthquakes

## Additional Courses

Plus an additional 18 credits in Earth Sciences at 300 level or above.

## Requirements for Distinction In Earth Sciences

## Minimum GPA Within Department 3.6

## Cumulative GPA, by End of Senior Year 3.4

## Other Criteria Required for the Degree with Distinction:

Students must complete a research-based senior thesis in conjunction with a faculty supervisor. The thesis must constitute independent, hypothesisdriven research involving investigative tools and techniques in the Earth Sciences. Students must submit the written thesis to the department and give a public seminar reporting their results. Students should register for EAR 409 - Senior Thesis in Earth Science in the semester in which they plan to submit the thesis. All else being satisfied, Distinction is conferred following a vote of approval from the Faculty of the Department of Earth Sciences.

## Earth Sciences, BS

Donald Siegel, Chair
204 Heroy Geology Laboratory,
315-443-2672.

## Faculty

Suzanne L. Baldwin, Marion E. Bickford, Paul G. Fitzgerald, Gregory D. Hoke, Linda C. Ivany, Christopher Junium, Jeffrey A. Karson, Laura K. Lautz, Zunli Lu, Robert Moucha, Cathryn R. Newton, Scott D. Samson, Christopher A. Scholz, Donald I. Siegel, Bruce H. Wilkinson

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The B.S. in Earth Sciences provides a strong background in basic science and geology, and through appropriate choice of electives can be tailored to meet a wide range of possible interests within the Earth Sciences. The B.S. in Earth Sciences with focus in environmental science is offered jointly with the biology department, and is recommended for those students specifically intending to pursue a career in the environmental arena.
The bachelor of arts degree in Earth Sciences is recommended for those students who enjoy and are intellectually intrigued by the Earth Sciences, but intend to pursue careers in other fields. The B.A. degree differs from the B.S. degree in that it requires fewer ancillary science courses and fewer electives from within the department. Along with intellectual enrichment, the B.A. degree provides a
rounded science foundation and critical thinking skills that can be applied to numerous other fields. Graduates with B.A.s in Earth Sciences go on to be lawyers, teachers, business people, environmental planners, public policy makers, and politicians, as well as geologists.

## Requirements for B.S. Degree in Earth Sciences

## Introductory Courses (one of the following sequences)

EAR 110 - Dynamic Earth and
EAR 210 - History of Earth and Life
EAR 203 - Earth System Science and
EAR 210 - History of Earth and Life
EAR 105 - Earth Science and
EAR 104 - Introductory Geology Lab
and
EAR 210 - History of Earth and Life
Note:
EAR 104 is the laboratory for EAR 105 and may be taken concurrently with EAR 210.

Core Courses in Earth Sciences
(12 credits plus an approved field course)
EAR 314 - Mineralogy
EAR 333 - Structural Geology
EAR 317 - Sedimentary Processes and Systems

## Summer Field Experience <br> EAR 470 - Experience Credit ( 6 cr ., by transfer)

## The Geology Field Experience

This requirement consists of 6 or more credit hours of transfer credit brought in as EAR 470. The requirement is satisfied by participation in an approved 6 -week summer geological field camp, or through an alternative approved field program. The field experience is typically scheduled in the summer between junior and senior years, but completion of the requirement during the summer following graduation is also possible. For enrollment in a traditional Geological Field Camp, courses in Structural Geology and Sedimentary Geology may be required.

## Required Ancillary Sciences and Mathematics

CHE 106 - General Chemistry Lecture I and
CHE 116 - General Chemistry Lecture II

CHE 107 - General Chemistry Laboratory I and
CHE 117 - General Chemistry Laboratory II
PHY 211 - General Physics I and
PHY 221 - General Physics Laboratory I
PHY 212 - General Physics II and
PHY 222 - General Physics Laboratory II
Any combination of Calculus I and Calculus II

MAT 285 - Life Sciences Calculus I and
MAT 286 - Life Sciences Calculus II
or
MAT 295 - Calculus I and
MAT 296 - Calculus II
or
MAT 285 - Life Sciences Calculus I and
MAT 296 - Calculus II
or
MAT 295 - Calculus I and
MAT 286 - Life Sciences Calculus II

## Other Elective Courses

( 24 credits of department or approved auxiliary science or math courses, at least 15 of which must be upper-division Earth Science credits).

Requirements for B.S. Degree in Earth Sciences with Focus in Environmental Science

Introductory Earth Science; Two of the Following Classes

One must be a lab class 7 credits
EAR 203 - Earth System Science and lab
EAR 110 - Dynamic Earth and lab
EAR 105 - Earth Science and *
EAR 104 - Introductory Geology Lab

## Note:

*Credit will not be given for both EAR 110 and EAR 105, or both EAR 110 and EAR 203, or both EAR 105 and EAR 203.

## Additional Course

AND you can pick one of the above courses with one of the courses below.

EAR 106 - Geohazards \& Natural Disasters
EAR 210 - History of Earth and Life
EAR 117-Oceanography

EAR 111 - Climate Change Past and Present
EAR 200 - Selected Topics
EAR 205 - Water and Our Environment
Introductory Biology 7 credits
BIO 121 - General Biology I
BIO 345 - Ecology and Evolution

## Core Courses 8 credits

EAR 314 - Mineralogy
EAR 317 - Sedimentary Processes and Systems

## Upper-Division Requirements

Select 21 credit hours from the following. At least 12 hours must be in Earth Science courses. Appropriate substitutions may be made by petition to the Earth Sciences advisor.

EAR 325 - Introduction to Paleobiology
EAR 333 - Structural Geology
EAR 510 - Paleolimnology
BIO 451 - Ecology
EAR 417 - Geochemistry
BIO 453 - Ecology Laboratory
EAR 401 - Hydrogeology
EAR 403 - Geomorphology
GEO 383 - Geographic Information Systems
EAR 405 - Global Change:Geologic Record
GEO 386 - Quantitative Geographic Analysis
EAR 544 - Quaternary Environmental and Climate Change (Envir)

CIE 471 - Environmental Chemistry and Analysis
BIO 409 - General Microbiology
CIE 555 - Hazardous Waste Mgmt
BIO 415 - Conservation Biology
CIE 561 - Air Resources I
EAR 419 - Environmental Aqueous Geochemistry

## Required Senior Capstone Course

3 credits
EAR 428 - Capstone Seminar in Environmental Science

Additional Requirements in Cognate Sciences and Math 20 to 22 credit hours

Combination of Mathematics Courses

* EITHER Any combination of

MAT 285 - Life Sciences Calculus I and

MAT 286 - Life Sciences Calculus II
or
MAT 295 - Calculus I and
MAT 296 - Calculus II
or
MAT 285 - Life Sciences Calculus I and
MAT 296 - Calculus II
or
MAT 295 - Calculus I and
MAT 286 - Life Sciences Calculus II
or
MAT 295 - Calculus I and
MAT 221 - Elementary Probability and Statistics I or

MAT 285 - Life Sciences Calculus I and
MAT 221 - Elementary Probability and Statistics I

* 1 year General Chemistry:

CHE 106 - General Chemistry Lecture I and
CHE 116 - General Chemistry Lecture II
CHE 107 - General Chemistry Laboratory I and
CHE 117 - General Chemistry Laboratory II

## A year of General Physics

(PHY 211/PHY 221 and PHY 212/PHY 222) is also recommended for students interested in pursuing careers in hydrology.

## Summer Field Experience

EAR 470 - Experience Credit (6 cr., by transfer)

## The Geology Field Experience

This requirement consists of 6 or more credit hours of transfer credit brought in as EAR 470. The requirement is satisfied by participation in an approved 6 -week summer geological field camp, or through an alternative approved field program. The field experience is typically scheduled in the summer between junior and senior years, but completion of the requirement during the summer following graduation is also possible. For enrollment in a traditional Geological Field Camp, courses in Structural Geology and Sedimentary Geology may be required.

## Additional Available Courses

Several courses in the College of Environmental Science and Forestry also will be available for students in this program, as substitutes for Earth Science Upper Division Electives, pending permission of the Undergraduate Advisor. These courses include:

EFB 415 - Ecological Biogeochemistry
FCH 515 - Methods of Environmental Chemical Analysis

EFB 452 - Principles of Chemical Control
FCH 352 - Introduction to Remote Sensing
EFB 505 - Microbial Ecology
EFB 510 - Health and Our Chemical Environment
EFB 524 - Limnology
EFB 525 - Limnology laboratory
Requirements for Distinction In Earth Sciences

Minimum GPA Within Department 3.6

Cumulative GPA, by End of Senior Year 3.4

## Other Criteria Required for the Degree with Distinction:

Students must complete a research-based senior thesis in conjunction with a faculty supervisor. The thesis must constitute independent, hypothesisdriven research involving investigative tools and techniques in the Earth Sciences. Students must submit the written thesis to the department and give a public seminar reporting their results. Students should register for EAR 409 - Senior Thesis in Earth Science in the semester in which they plan to submit the thesis. All else being satisfied, Distinction is conferred following a vote of approval from the Faculty of the Department of Earth Sciences.

Economics, BA
Chair:
William Horrace
110 Eggers Hall
315-443-3612.

## Faculty

Elizabeth Ashby, Badi Baltagi, Kristina Buzard, Donald H. Dutkowsky, Gary V. Engelhardt, Jerry Evensky, William Horrace, Chihwa (Duke) Kao, Leyla Karakas, Jerry S. Kelly, Jeffrey D. Kubik, Derek Laing, Yoonseok Lee, Chung-Chin (Eugene) Liu, Mary E. Lovely, Robin P. Malloy, Devashish Mitra, Piyusha Mutreja, Inge O'Connor, Jan Ivar Ondrich, John L. Palmer, J. David Richardson, Stuart S. Rosenthal, Abdulaziz Shifa, Perry Singleton, A. Dale Tussing, Michael Wasylenko, Peter J. Wilcoxen, John M. Yinger

Economists analyze the internal functioning of markets and market outcomes. While modern economics focuses on market forces, markets function imperfectly in some cases and that introduces scope for policy action. Our curriculum emphasizes the application of economics to the study of public policy issues and the role of government in a market economy. Examples include analysis of international trade and relations, economic behavior in the workplace, health care, taxation, and numerous other spheres of a global economy. Students who major in economics prepare themselves for a variety of careers. Some move on to graduate study in economics and become professional economists; the majority, however, pursue careers in law, public policy, government, and many aspects of business, including banking and financial analysis, management, and marketing. Consequently, some students choose to pursue double majors and dual degrees. Further information on these programs is available in the Academic Rules and Regulations section of this catalog or in the economics department office.

The department offers both the B.A. degree in economics as well as a B.S. degree in economics. The B.A. has a liberal arts focus and emphasizes the applied and policy aspects of economics. The B.S. is attractive to the more mathematically oriented student.

## Major Requirements

## To Earn a B.A. in Economics

A student becomes an economics major after consulting with an economics advisor on a plan and course of study and bringing them to the department office for approval. To earn a B.A. in economics, a student:

## 1. Quantitative Skills Requirement

Fulfills the quantitative skills requirement for the liberal arts core

## 2. Principles of Economics

Completes 3-6 credits of
ECN 203 - Economic Ideas and Issues or equivalent

## 3. Upper-division Economics Courses

Completes 24 credits of
ECN 301 - Intermediate Microeconomics or
ECN 311 - Intermediate Mathematical Microeconomics

ECN 302 - Intermediate Macroeconomics
ECN 422 - Introduction to Statistics and Econometrics

Credit will not be given for both ECN 422 and ECN 521

## Five other upper-division electives in economics

Upper-division electives are ECN 300 or higher, (excluding ECN 301, ECN 302, ECN 311 , ECN 365, ECN 422 and ECN 470), including at least two courses that have a prerequisite of:

ECN 301 - Intermediate Microeconomics or
ECN 311 - Intermediate Mathematical Microeconomics or

ECN 302 - Intermediate Macroeconomics
Credit will not be given for both ECN 422 and ECN 521

## Additional Information

In all, 27 to 30 credits of economics courses are required (depending on whether 3 or 6 credits of principles are taken).

The Economics Department applies a two-thirds rule to the upper-division economics courses (item 3 above). Two-thirds of the upper-division coursework must be taken at Syracuse University or its affiliate programs, such as SU Abroad. In practical terms, for the B.A. degree, no more than two of the upper-division courses may be taken at another college or university and applied to the economics major at Syracuse University.
Graduation with a B.A. in economics requires an overall grade point average of 2.0 or higher in 24 credits of upper-division economics courses.

## Scheduling

It is recommended that students sequence their courses in the following manner:

The Principles of Economics (ECN 203 or equivalent) and the quantitative skills requirement of the Liberal Arts Core should be completed by the end of the sophomore year or earlier.

The quantitative skills requirement of the Liberal Arts Core should be completed before the intermediate theory courses ((ECN 301 or ECN 311 ) and ECN 302 ) are taken.
The intermediate theory courses ((ECN 301 or ECN 311 ) and ECN 302 ) are the prerequisite courses for ECN 422 and many of upper-division electives. For this reason, it is important that students complete their intermediate coursework by the end of their junior year or earlier. |
Students should complete at least two upperdivision electives in economics by the end of their junior year or earlier.
ECN 422 and three of the five economics major electives should be taken in the senior year or
earlier.
Senior majors are encouraged to enroll in courses numbered 500-599. Often these classes are designed to be small seminars for the advanced undergraduate. Undergraduate majors who have completed the stated prerequisites for the 500 -level courses should not be discouraged by the possibility that some master's students may also be enrolled.

## Substitutions

Courses not listed in the above plan and/or taken outside Syracuse University will not be counted toward the fulfillment of economics degree requirements except upon the approval of a petition. Such petitions should be approved before the substitution course is taken, unless it was completed while the student was regularly enrolled in the school or college in which the course was offered. For management students with a second major in economics, FIN 355 may be used as a substitute for ECN 481. Credit is not given for both ECN 481 and FIN 355.

## Curriculum Suggestions

Students who are more analytically inclined or interested in graduate school should plan to take MAT 295/MAT 296, and take ECN 311 rather than ECN 301. In addition, they may wish to take ECN 505 and ECN 521/ECN 522 as upper-division economics electives.
Students planning to enter law school after graduation may find ECN 431 ECN 451 and ECN 481 of particular interest, while those who plan to pursue graduate degrees in management may want to choose from ECN 465, ECN 481, ECN 487, and ECN 566. Students pursuing an international specialty might be interested in ECN 410 Economic Development, ECN 465, and ECN 481. Students preparing a public sector specialty might find ECN 431 of particular interest. Those with a human resources interest should select electives from ECN 451 and ECN 481. Those interested in macroeconomic theory should consider ECN 431, ECN 481 and ECN 566.

The School of Management allows economics majors to take one course per semester in the School of Management. These courses are counted as general electives and not as economics or arts and sciences electives.

## Economics, BS

## Chair:

William Horrace
110 Eggers Hall
315-443-3612.

## Faculty

Elizabeth Ashby, Badi Baltagi, Kristina Buzard, Donald H. Dutkowsky, Gary V. Engelhardt, Jerry Evensky, William Horrace, Chihwa (Duke) Kao, Leyla Karakas, Jerry S. Kelly, Jeffrey D. Kubik, Derek Laing, Yoonseok Lee, Chung-Chin (Eugene) Liu, Mary E. Lovely, Robin P. Malloy, Devashish Mitra, Piyusha Mutreja, Inge O'Connor, Jan Ivar Ondrich, John L. Palmer, J. David Richardson, Stuart S. Rosenthal, Abdulaziz Shifa, Perry Singleton, A. Dale Tussing, Michael Wasylenko, Peter J. Wilcoxen, John M. Yinger
Economists analyze the internal functioning of markets and market outcomes. While modern economics focuses on market forces, markets function imperfectly in some cases and that introduces scope for policy action. Our curriculum emphasizes the application of economics to the study of public policy issues and the role of government in a market economy. Examples include analysis of international trade and relations, economic behavior in the workplace, health care, taxation, and numerous other spheres of a global economy. Students who major in economics prepare themselves for a variety of careers. Some move on to graduate study in economics and become professional economists; the majority, however, pursue careers in law, public policy, government, and many aspects of business, including banking and financial analysis, management, and marketing. Consequently, some students choose to pursue double majors and dual degrees. Further information on these programs is available in the Academic Rules and Regulations section of this catalog or in the economics department office.

The department offers both the B.A. degree in economics as well as a B.S. degree in economics. The B.A. has a liberal arts focus and emphasizes the applied and policy aspects of economics. The B.S. is attractive to the more mathematically oriented student.
The B.S. degree has an orientation toward the statistical and mathematical skills necessary to work as a professional economist or pursue graduate work in economics, public policy, or business. Students who want these career tracks or who want to acquire more analytical skills that can be used in a variety of careers should pursue the B.S. degree.

## Major Requirements

## To Earn a B.S. in Economics

A student becomes an economics major after consulting with an economics advisor on a plan and course of study and bringing them to the department office for approval. To earn a B.S. in economics, a student:

\author{

1. Completes calculus courses: <br> MAT 295 - Calculus I <br> MAT 296 - Calculus II
}

## 2. Completes 3 to 6 credits of ECN 203 - Economic Ideas and Issues or the equivalent

## 3. Completes 30 credits of upperdivision economics courses, including: <br> ECN 311 - Intermediate Mathematical Microeconomics (not ECN 301)

ECN 302 - Intermediate Macroeconomics
ECN 505 - Mathematical Economics
ECN 521 - Economic Statistics
ECN 522 - Econometric Methods

## Upper-Division Electives in Economics

Five other upper-division electives in economics (ECN 300 or higher, excluding ECN 365, ECN 422 and ECN 470), including at least two courses that have a prerequisite of ECN 311 or ECN 302.

## Additional Information

In all, 30 credits of upper-division coursework (courses numbered 300 or higher) in economics are required, in addition to the two courses in calculus, and principles of economics. (In some instances, SOM majors will be allowed to substitute MAS 261 and MAS 362 for ECN 521.)

The Economics Department applies a two-thirds rule to the upper-division economics courses (item 3 above). Two-thirds of the upper-division coursework must be taken at Syracuse University or its affiliate programs, such as SU Abroad. In practical terms, for the B.S. degree, no more than three of the upper-division courses may be transferred in. Because of the specialized nature of ECN 311, ECN 505 and ECN 522, it may be difficult to find acceptable substitutes at other colleges or universities.

Graduation with a B.S. in Economics requires an overall grade point average of 2.0 or higher in the 30 credits of upper-division economics courses. Students who wish to pursue the B.S. degree in Arts and Sciences must petition the economics department to be formally accepted as a candidate.

## Scheduling

It is recommended that students sequence their courses in the following manner:
The Principles of Economics (ECN 203 or equivalent) and the two required calculus courses,MAT 295 and MAT 296 , should be
completed by the end of the sophomore year or earlier, and before taking ECN 311 .

ECN 311 can be taken in the fall of the junior year or earlier, along with ECN 521. ECN 522 can be taken in the spring of the junior year or earlier, along with ECN 302. One (or two) of the five economics upper-division electives should be taken by the end of the junior year or earlier.

ECN 505 and four (or three) of the five economics upper-division electives should be taken in the senior year or earlier.

Senior majors are encouraged to enroll in courses numbered 500-599. Often these classes are designed to be small seminars for the advanced undergraduate. Undergraduate majors who have completed the stated prerequisites for the 500 -level courses should not be discouraged by the possibility that some master's students may also be enrolled.

## Substitutions

Substitution suggestions described above for the B.A. degree apply to B.S. degree majors as well.

## Curriculum Suggestions

The curriculum suggestions described above for the B.A. degree apply to B.S. degree economic majors as well.

## Energy and Its Impacts, BA

Integrated Learning Major on Energy and its Impacts

## Contact:

Peter Saulson
(315) 443-5994
psaulson@syr.edu

## Faculty

Mark S. Braiman, Douglas A. Frank, Chris E. Johnson, Jane M. Read, Christopher A. Scholz, Peter J. Wilcoxen

## Description

Many of the issues facing humanity today center on energy: its supply, its use, and the impact that our energy use technologies have on our environment. The Integrated Learning Major on Energy and its Impacts gives students the interdisciplinary background required to understand the origin of our current problems and the ability to seek solutions to them. Students from a broad range of primary majors (in the Natural Sciences, Social Sciences, Engineering, or Management) will come together to confront some
of the most important challenges that confront the world. A team-based capstone project will enhance interdisciplinary learning while building problem-solving skills.

Intended for students in the following primary majors: for College of Arts and Sciences students in Biology, Chemistry, Biochemistry, Biotechnology, Earth Sciences, Physics, Environmental Sciences, Economics, Geography, Political Science, Public Affairs, or International Relations, for LCS students in Environmental Engineering, Mechanical Engineering, Chemical Engineering, or Electrical Engineering, and for Whitman students in Entrepreneurship and Emerging Enterprises or Finance. (Note: Engineering students must also enroll in the LCS Energy Systems Minor.) Other primary majors may also be possible with approval of the director.

Students must take three Foundation courses, four or five Elective courses, a Junior Seminar, and a Senior Capstone Seminar, as described below.

## Foundation Courses

One course covering the basic science of energy.

Either:
PHY 101 - Major Concepts of Physics I
CHE 103 - Chemistry in the Modern World
CHE 116 - General Chemistry Lecture II
MAE 251 - Thermodynamics
PHY 531 - Thermodynamics and Statistical Mechanics

## A course in environmental science

 (natural science).Either:
EAR 203 - Earth System Science (no prerequisite) preferred, or

EAR 110 - Dynamic Earth (no prerequisite) or
EAR 111 - Climate Change Past and Present (no prerequisite), or
GEO 215 - Global Environmental Change (no prerequisite, GEO 155 is recommended), or

BIO 115 - Ecological Problems and Society
(req't waived for students who take BIO 121, BIO 123 and at least one upper-division BIO course from the list below)

## A course in social science.

Either:
ECN 203 - Economic Ideas and Issues (no prerequisite), or
GEO 103 - Environment and Society (no prerequisite), or

PSC 318 - Technology, Politics, and Environment (no prerequisite), or

SOC 300 - Selected Topics Sociology of the Environment

## Electives

Electives, by taking 4 additional elective courses from the following list, at least one of which must be in social science (marked with * on list below.) No more than two courses from a single Department can be used to satisfy this requirement. Students may need to take a fifth course from this list to meet the requirement of 18 credits at the 300 level or above.

BIO 415 - Conservation Biology
BIO 451 - Ecology
CHE 346 - Physical Chemistry
CHE 400 - Selected Topics The Chemistry of Global Energy and Carbon Utilization (prereq: high school chemistry, or CHE 103, or CHE 106)

EAR 405 - Global Change:Geologic Record
PHY 305 - Solar Energy Science and Architectures
GEO 326 - The Geography of Climate and Weather
GEO 300 - Selected Topics Geography of Oil *
GEO 327 - Geography of Coastal Environments
GEO 400 - Selected Topics Energy, History, and Society *
ECN 437 - Environmental and Resource Economics *

EST 427 - Environmental and Energy Auditing (no prereq)

BPE 441 - Biomass Energy
MAE 551 - Energy Conversion
MAE 587 - Design of Solar Energy System
PAF 451 - Environmental Policy *
PSC 302 - Environmental Politics and Policy (prereq PSC 121) *

## Junior Seminar

This one-credit course for junior majors in Energy and Its Impacts will focus student attention on the range of interdisciplinary problems associated with energy use and its impact on the natural and social environment.

PHY 398 - Junior seminar in Energy and its Impacts

## Capstone Seminar

The capstone seminar (3 credits) will involve students in an interdisciplinary investigation of energy and its impacts. Term project carried out by teams that include at least one student each
from Natural Sciences (or Engineering) and from Maxwell. Projects will focus on energy issues that arise in the Syracuse community.
PHY 498 - Capstone Seminar in Energy and its Impacts

## Energy and Its Impacts, BS

Integrated Learning Major on Energy and its Impacts

## Contact:

Peter Saulson
(315) 443-5994
psaulson@syr.edu

## Faculty

Mark S. Braiman, Douglas A. Frank, Chris E. Johnson, Jane M. Read, Christopher A. Scholz, Peter J. Wilcoxen

## Description

Many of the issues facing humanity today center on energy: its supply, its use, and the impact that our energy use technologies have on our environment. The Integrated Learning Major on Energy and its Impacts gives students the interdisciplinary background required to understand the origin of our current problems and the ability to seek solutions to them. Students from a broad range of primary majors (in the Natural Sciences, Social Sciences, Engineering, or Management) will come together to confront some of the most important challenges that confront the world. A team-based capstone project will enhance interdisciplinary learning while building problem-solving skills.

Intended for students in the following primary majors: for College of Arts and Sciences students in Biology, Chemistry, Biochemistry, Biotechnology, Earth Sciences, Physics, Environmental Sciences, Economics, Geography, Political Science, Public Affairs, or International Relations, for LCS students in Environmental Engineering, Mechanical Engineering, Chemical Engineering, or Electrical Engineering, and for Whitman students in Entrepreneurship and Emerging Enterprises or Finance. (Note: Engineering students must also enroll in the LCS Energy Systems Minor.) Other primary majors may also be possible with approval of the director.
Students must take three Foundation courses, four or five Elective courses, a Junior Seminar, and a Senior Capstone Seminar, as described below.

## Foundation Courses

One course covering the basic science of energy.
Either:
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CHE 103 - Chemistry in the Modern World
CHE 116 - General Chemistry Lecture II
MAE 251 - Thermodynamics
PHY 531 - Thermodynamics and Statistical Mechanics

## A course in environmental science (natural science).

Either:
EAR 203 - Earth System Science (no prerequisite) preferred, or

EAR 110 - Dynamic Earth (no prerequisite) or
EAR 111 - Climate Change Past and Present (no prerequisite), or

GEO 215 - Global Environmental Change (no prerequisite, GEO 155 is recommended), or
BIO 115 - Ecological Problems and Society
(req't waived for students who take BIO 121, BIO 123 and at least one upper-division BIO course from the list below)

## A course in social science.

Either:
ECN 203 - Economic Ideas and Issues (no prerequisite), or

GEO 103 - Environment and Society (no prerequisite), or
PSC 318 - Technology, Politics, and Environment (no prerequisite), or
SOC 300 - Selected Topics Sociology of the Environment

## Electives

Electives, by taking 4 additional elective courses from the following list, at least one of which must be in social science (marked with * on list below.) No more than two courses from a single Department can be used to satisfy this requirement. Students may need to take a fifth course from this list to meet the requirement of 18 credits at the 300 level or above.

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BIO 451 - Ecology
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CHE 400 - Selected Topics The Chemistry of Global Energy and Carbon Utilization (prereq: high school chemistry, or CHE 103, or CHE 106)

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PHY 305 - Solar Energy Science and Architectures
GEO 326 - The Geography of Climate and Weather
GEO 300 - Selected Topics Geography of Oil *
GEO 327 - Geography of Coastal Environments
GEO 400 - Selected Topics Energy, History, and Society *
ECN 437 - Environmental and Resource Economics *

EST 427 - Environmental and Energy Auditing (no prereq)

BPE 441 - Biomass Energy
MAE 551 - Energy Conversion
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PAF 451 - Environmental Policy *
PSC 302 - Environmental Politics and Policy (prereq PSC 121)

## Junior Seminar

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## Capstone Seminar

The capstone seminar (3 credits) will involve students in an interdisciplinary investigation of energy and its impacts. Term project carried out by teams that include at least one student each from Natural Sciences (or Engineering) and from Maxwell. Projects will focus on energy issues that arise in the Syracuse community.
PHY 498 - Capstone Seminar in Energy and its Impacts

## English and Textual Studies, BA

## Director:

TBA, Director of Undergraduate Studies
401 Hall of Languages
315-443-2173

## Faculty

Crystal Bartolovich, Dorri Beam, Michael Burkard, Dympna Callaghan, Jonathan Dee, Susan Edmunds, Carol Fadda-Conrey, Arthur Flowers, Chris Forster, Ken Frieden, Mike Goode, Roger Hallas, Chris Hanson, Brooks Haxton, Mary Karr, Christopher Kennedy, Claudia Klaver, Erin S. Mackie, Patricia Moody, Kevin Morrison, Donald E.

Morton, Patricia Roylance, George Saunders, Will Scheibel, Stephanie Shirilan, Bruce Smith, Dana Spiotta, Harvey Teres, Silvio Torres-Saillant The Department of English offers programs in textual and cultural studies, with special emphasis on literary history, criticism, and theory. Courses deal with such problems as the nature and implications of reading and interpretation, the production of meaning in language and culture, and the nature of literary forms. The curriculum also includes courses in creative writing.
Students who wish to major in English and Textual Studies should consult the Associate Director of Undergraduate Studies to be assigned an appropriate advisor, who helps plan the course of study.

Some students majoring in English and Textual Studies may wish to pursue a concentration in either Creative Writing or Film and Screen Studies.

Some students majoring in English and Textual Studies may wish to apply for a dual enrollment with another school or college within the University, such as the School of Information Studies, the S.I. Newhouse School of Public Communications, or the School of Education. Those interested in certification to teach English should see "English Education (Dual), BA" in the School of Education's Academic Offerings. Students must have departmental approval to become candidates for honors or distinction in English and Textual Studies. For more information, see the web site at english.syr.edu.

## Major Requirements

To qualify for a B.A. degree in English and Textual Studies, students complete a total of 30 credits of coursework. These credits include:

ETS 242 - Reading and Interpretation

## And one course chosen from among the following:

ETS 113 - Survey of British Literature, Beginnings to 1789
ETS 115 - Topics in British Literary History
ETS 117 - Survey of American Literature, Beginnings to 1865
ETS 118 - Survey of American Literature, 1865 to Present

ETS 119 - Topics in U.S. Literary History
ETS 121 - Introduction to Shakespeare
ETS 122 - Introduction to the Novel
ETS 142 - Narratives of Culture:Introduction to Issues of Critical Reading
ETS 145 - Reading Popular Culture
ETS 146 - Reading Screen Culture

ETS 151 - Interpretation of Poetry
ETS 152 - Interpretation of Drama
ETS 153 - Interpretation of Fiction
ETS 154 - Interpretation of Film
ETS 155 - Interpretation of Nonfiction
ETS 181 - Class and Literary Texts
ETS 182 - Race and Literary Texts
ETS 184 - Ethnicity and Literary Texts
ETS 192 - Gender and Literary Texts
(Advanced Placement credit does not count toward this requirement.)

## Remaining 24 credits

The remaining 24 credits are in courses numbered above 299 and must include:
ETS 305 - Topics in Critical Analysis

## Five other courses (15 credits)

Five critical courses numbered 300 or above. Two of these five courses must focus on texts written before 1900.

Two remaining elective courses may be chosen from any upper division ETS critical courses, or from among upper division creative writing courses (ETS), or one upper division Literature in Translation course (LIT) or one approved upper division Writing Program course (WRT). Of the two electives, only one may come from outside the department.

## Dually enrolled in the School of Education

Students dually enrolled in the School of Education include the following among the 24 credits of upper-division courses:
ETS 325 - History and Varieties of English
A course in Shakespeare
A course with multicultural content

## And one of the following:

WRT 301 - Advanced Writing Studio: Civic Writing
WRT 303 - Advanced Writing Studio: Research and Writing

WRT 307 - Advanced Writing Studio: Professional Writing

WRT 428 - Studies in Composition, Rhetoric and Literacy

Pursuing a concentration in Film and Screen Studies

Students pursuing a concentration in Film and Screen Studies within the ETS major must meet
the 100 -level requirement by taking ETS 145, ETS 146 , or ETS 154. Three of the five upper division ETS critical courses taken must focus on film and screen studies (as indicated by the terms "Film," "Cinema," "Media," and/or "Screen" in the section title). One major elective must be an upper division film or screen studies course, either from ETS or an approved course from another department.

## Pursuing a concentration in Creative Writing

Students pursuing a concentration in Creative Writing within the ETS major must take either ETS 215 or ETS 217 as a prerequisite to the advanced workshops. ETS 151 or ETS 153 must be taken to meet the 100-level major requirement. One of the five upper division ETS critical courses taken must be ETS 301, ETS 303, or ETS 304. Both major electives must be advanced creative writing workshops (ETS 4011 or ETS 403).

## English Education (Dual), BA

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification
requirements apply. Please see the following detailed information.
The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester <br> (fall of the senior year)

Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

## UNDERGRADUATE COURSE CATALOG

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## English Education

## Contact:

Dr. Kelly Chandler-Olcott, Program Coordinator, 200 Huntington Hall, 315-443-4755

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. English education majors must complete:

One mathematics (MAT) course from Liberal Arts Core Quantitative Skills List (3 credits) or

MAT 117 - Foundational Mathematics via Problem Solving I or
MAT 118 - Foundational Mathematics via Problem Solving II
if not completing the Quantitative Skills requirement for the Liberal Arts Core. (3 credits)

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts related course within Arts and Sciences (HOA or HOM, or other approved humanities course focusing on one or more of the arts) (3 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study

## English Content

English Education students must complete the English and Textual Studies major as defined by the English Department. Twenty-four credits of the 30 required must be upper-division ( 300 level and above).

English Education students must include the following courses (not required of other ETS majors) within their majors:

ETS 325 - History and Varieties of English
One course concentrating on Shakespeare (3 credits)

One course with a multicultural (non-Western/ American minority) emphasis (3 credits)

## One upper division WRT course,

 chosen fromWRT 301 - Advanced Writing Studio: Civic Writing
WRT 303 - Advanced Writing Studio: Research and Writing
WRT 307 - Advanced Writing Studio: Professional Writing

WRT 428 - Studies in Composition, Rhetoric and Literacy

## One Speech Communication Course

In addition, students must complete one speech communication course ( 3 credits) from the following:

CRS 225 - Public Advocacy
CRS 325 - Presentational Speaking
Ethics, BA

## Integrated Learning Major In Ethics

## Contact:

Ben Bradley
541 Hall of Languages
315-443-5813
wbradley@syr.edu
Faculty: Kenneth Baynes, Elizabeth Cohen, Samuel Gorovitz, Glyn Morgan, Hille Paakkunainen, David Sobel, Laurence Thomas, Ernest Wallwork

Professionals in technically demanding fields are commonly asked to apply their expertise to other seemingly unrelated disciplines. As a result, they must have a comprehensive understanding of not only their own field, but also secondary knowledge of another broadly based, often interdisciplinary, field of study. A chemist might lend his or her expertise to a matter of legal or ethical importance. A curator might evaluate scientific and historical evidence about a painting's authenticity. A journalist might research a story involving science, medicine, and technology.

The major in Ethics will integrate with the following majors: management, television/radio/film, broadcast/newspaper journalism, engineering, computer science, biology, biomedical and chemical engineering, political science, public health, anthropology, psychology, sociology, and international relations, but other combinations may also be possible with approval of the director.

This synergistic approach adds scholarly mettle to both the major and the interdisciplinary program, while exploiting their connective properties.

First- and second-year courses contemplating the Integrated Learning Program in Ethics are advised to take one of the following courses: ANT 185, PHI 191/PHI 192/PHI 209, REL 252, or WGS 230/ SOC 230.

Admittance requires an overall 3.0 GPA and a B or better in both PHI 391 and PHI 393.

## Requirements

Students must successfully complete all the requirements necessary to obtain a major in one of the following: Management, Television/ Radio/Film, Broadcast/Newspaper Journalism, Engineering, Computer Science, Biology, Biomedical and Chemical Engineering, Political Science, Public Health, Anthropology, Psychology, Sociology, and International Relations, but other requisite majors may also be possible with approval of the director.
To complete, 24 credits of approved ethics courses are required. Of those, at least 18 must be numbered 300 or higher. In addition, there are the following specific requirements:
two courses in contemporary and historical philosophical theory: PHI 391 and PHI 393;
one ethics course related to the student's requisite major (from A), and another course that deals with ethical issues from outside of the requisite major's division, from courses listed in (B) or (C), as described below:
(A) Required Course from the requisite major:

## Management

LPP 467 - Management and Ethics
plus one course from (B) or (C)

## Journalism

COM 411 - Social and Public Issues in Public Communications
plus one course from (B) or (C)
Television/Radio/Film
PHI 293 - Ethics and the Media Professions
plus one course from (B) or (C)

## Political Science/International Relations

 PSC 363 - Ethics and International Relations plus one course from (C)Biology, Biomedical and Chemical Engineering
REL 552 - Bioethics
plus one course from (B)

Engineering, Computer Science
ECS 392 - Ethical Aspects of Engineering and Computer Science
plus one course from (B) or (C)

## Environmental Engineering

PHI 394 - Environmental Ethics
plus one course from (B) or (C)
Public Health
HTS 415 - Pre-health or
HTS 615 - Pre-health
or
PHI 593 - Ethics and the Health professions plus one course from (B)

## Anthropology

REL 552 - Bioethics or
PSC 363 - Ethics and International Relations plus one course from (C)

Psychology
PSY 395 - Abnormal Psychology or
PSY 415 - Introduction to Clinical Psychology or PSY 425 - Internships in Clinical Psychology or PSY 445 - Behavior Disorders in Children plus one course from (C)

Sociology
SOC 319 - Qualitative Methods in Sociology plus one course from (C)

## (B) Courses that Deal with Ethical Issues

SOC 319 - Qualitative Methods in Sociology
ANT 442 - Methods in Archaeology
ANT 445 - Public Policy and Archaeology
ANT 481 - Ethnographic Techniques
PSY 395 - Abnormal Psychology
PSY 415 - Introduction to Clinical Psychology
PSY 425 - Internships in Clinical Psychology
PSY 445 - Behavior Disorders in Children

## (C) Courses that Deal with Ethical Issues

PHI 293 - Ethics and the Media Professions
PSC 363 - Ethics and International Relations
PHI 394 - Environmental Ethics
PHI 594 - Bioethics

PHI 593 - Ethics and the Health professions

## Senior Capstone Project for Ethics

PHI 495 - Senior Capstone Project for Ethics
Three additional courses from the list below
(remember that at least 18 credits must be completed in courses numbered 300 or higher in order to fulfill this requirements of the degree).

## Lower-division courses

ANT 185 - Global Encounters:Comparing World Views \& Values Cross-Culturally
PHI 191 - Ethics and Contemporary Issues (formerly Ethics and Value Theory)
PHI 192 - Introduction to Moral Theory (proposed new course)
PHI 209 - Introduction to Moral Philosophy (Honors)
PHI 293 - Ethics and the Media Professions
REL 252 - Ethical Decision Making
WGS 230 - Intergroup Dialogue
Upper-division courses
ANT 442 - Methods in Archaeology
ANT 445 - Public Policy and Archaeology
ANT 459 - Contemporary Native North American Issues
ANT 475 - Culture and Disputing
ANT 477 - Culture and Conflict
ANT 481 - Ethnographic Techniques
COM 411 - Social and Public Issues in Public Communications
ECS 392 - Ethical Aspects of Engineering and Computer Science
GEO 353-Geographies of Environmental Justice
HTW 415 - Public Health Ethics (proposed new course)
LPP 467 - Management and Ethics
PAF 351 - Global Social Problems
PHI 391 - History of Ethics
PHI 393 - Contemporary Ethics
PHI 394 - Environmental Ethics
PHI 417 - Contemporary Political Philosophy
PHI 493 - Contemporary Ethical Issues
PHI 550 - Selected Topics in Philosophy Decision Theory or

PSC 400 - Selected Topics Decision Theory
PHI 593 - Ethics and the Health professions

PSC 354 - Human Rights and Global Affairs
PSC 363 - Ethics and International Relations
PSY 395 - Abnormal Psychology
PSY 415 - Introduction to Clinical Psychology
PSY 425 - Internships in Clinical Psychology
PSY 445 - Behavior Disorders in Children
REL 359 - Stem Cells and Society
REL 552 - Bioethics
SOC 319 - Qualitative Methods in Sociology
SOC 364 - Aging and Society
SOC 377 - Class, Status, and Power
SOC 433 - Race, Class, and Gender
SOC 441 - Federal Indian Policy and Native American Identity

SOC 492 - Work and Inequality
Other courses as approved by the director of the Ethics major

## Ethics, BS

Integrated Learning Major In Ethics

## Contact:

Ben Bradley
541 Hall of Languages
315-443-5813
wbradley@syr.edu
Faculty: Kenneth Baynes, Elizabeth Cohen, Samuel Gorovitz, Glyn Morgan, Hille Paakkunainen, David Sobel, Laurence Thomas, Ernest Wallwork

Professionals in technically demanding fields are commonly asked to apply their expertise to other seemingly unrelated disciplines. As a result, they must have a comprehensive understanding of not only their own field, but also secondary knowledge of another broadly based, often interdisciplinary, field of study. A chemist might lend his or her expertise to a matter of legal or ethical importance. A curator might evaluate scientific and historical evidence about a painting's authenticity. A journalist might research a story involving science, medicine, and technology.

The major in Ethics will integrate with the following majors: management, television/radio/film, broadcast/newspaper journalism, engineering, computer science, biology, biomedical and chemical engineering, political science, public health, anthropology, psychology, sociology, and international relations, but other combinations may also be possible with approval of the director.

This synergistic approach adds scholarly mettle to
both the major and the interdisciplinary program, while exploiting their connective properties. First- and second-year courses contemplating the Integrated Learning Program in Ethics are advised to take one of the following courses: ANT 185, PHI 191/PHI 192/PHI 209, REL 252, or WGS 230/ SOC 230.

Admittance requires an overall 3.0 GPA and a B or better in both PHI 391 and PHI 393.

## Requirements

Students must successfully complete all the requirements necessary to obtain a major in one of the following: Management, Television/ Radio/Film, Broadcast/Newspaper Journalism, Engineering, Computer Science, Biology, Biomedical and Chemical Engineering, Political Science, Public Health, Anthropology, Psychology, Sociology, and International Relations, but other requisite majors may also be possible with approval of the director.
To complete, 24 credits of approved ethics courses are required. Of those, at least 18 must be numbered 300 or higher. In addition, there are the following specific requirements:
two courses in contemporary and historical philosophical theory: PHI 391 and PHI 393;
one ethics course related to the student's requisite major (from A), and another course that deals with ethical issues from outside of the requisite major's division, from courses listed in (B) or (C), as described below:

## (A) Required Course from the requisite major:

## Management

LPP 467 - Management and Ethics
plus one course from (B) or (C)

## Journalism

COM 411 - Social and Public Issues in Public Communications
plus one course from (B) or (C)

## Television/Radio/Film

PHI 293 - Ethics and the Media Professions plus one course from (B) or (C)

## Political Science/International Relations

PSC 363 - Ethics and International Relations
plus one course from (C)
Biology, Biomedical and Chemical Engineering

REL 552 - Bioethics
plus one course from (B)

## Engineering, Computer Science

ECS 392 - Ethical Aspects of Engineering and Computer Science
plus one course from (B) or (C)

## Environmental Engineering

PHI 394 - Environmental Ethics
plus one course from (B) or (C)

## Public Health

HTS 415 - Pre-health or
HTS 615 - Pre-health
or
PHI 593 - Ethics and the Health professions
plus one course from (B)
Anthropology
REL 552 - Bioethics or
PSC 363 - Ethics and International Relations plus one course from (C)

Psychology
PSY 395 - Abnormal Psychology or
PSY 415 - Introduction to Clinical Psychology or
PSY 425 - Internships in Clinical Psychology or
PSY 445 - Behavior Disorders in Children
plus one course from (C)

## Sociology

SOC 319- Qualitative Methods in Sociology plus one course from (C)

## (B) Courses that Deal with Ethical Issues

SOC 319- Qualitative Methods in Sociology
ANT 442 - Methods in Archaeology
ANT 445 - Public Policy and Archaeology
ANT 481 - Ethnographic Techniques
PSY 395 - Abnormal Psychology
PSY 415 - Introduction to Clinical Psychology
PSY 425 - Internships in Clinical Psychology
PSY 445 - Behavior Disorders in Children
(C) Courses that Deal with Ethical Issues

PHI 293 - Ethics and the Media Professions
PSC 363 - Ethics and International Relations

PHI 394 - Environmental Ethics
PHI 594 - Bioethics
PHI 593 - Ethics and the Health professions

## Senior Capstone Project for Ethics

PHI 495 - Senior Capstone Project for Ethics
Three additional courses from the list below
(remember that at least 18 credits must be completed in courses numbered 300 or higher in order to fulfill this requirements of the degree).

## Lower-division courses

ANT 185 - Global Encounters:Comparing World Views \& Values Cross-Culturally

PHI 191 - Ethics and Contemporary Issues (formerly Ethics and Value Theory)
PHI 192 - Introduction to Moral Theory (proposed new course)
PHI 209 - Introduction to Moral Philosophy (Honors)

PHI 293 - Ethics and the Media Professions
REL 252 - Ethical Decision Making
WGS 230 - Intergroup Dialogue
Upper-division courses
ANT 442 - Methods in Archaeology
ANT 445 - Public Policy and Archaeology
ANT 459 - Contemporary Native North American Issues
ANT 475 - Culture and Disputing
ANT 477 - Culture and Conflict
ANT 481 - Ethnographic Techniques
COM 411 - Social and Public Issues in Public Communications
ECS 392 - Ethical Aspects of Engineering and Computer Science

GEO 353 - Geographies of Environmental Justice
HTW 415 - Public Health Ethics (proposed new course)
LPP 467 - Management and Ethics
PAF 351 - Global Social Problems
PHI 391 - History of Ethics
PHI 393 - Contemporary Ethics
PHI 394 - Environmental Ethics
PHI 417 - Contemporary Political Philosophy
PHI 493 - Contemporary Ethical Issues
PHI 550 - Selected Topics in Philosophy Decision Theory or

PSC 400 - Selected Topics Decision Theory
PHI 593 - Ethics and the Health professions
PSC 354 - Human Rights and Global Affairs
PSC 363 - Ethics and International Relations
PSY 395 - Abnormal Psychology
PSY 415 - Introduction to Clinical Psychology
PSY 425 - Internships in Clinical Psychology
PSY 445 - Behavior Disorders in Children
REL 359 - Stem Cells and Society
REL 552 - Bioethics
SOC 319 - Qualitative Methods in Sociology
SOC 364 - Aging and Society
SOC 377 - Class, Status, and Power
SOC 433 - Race, Class, and Gender
SOC 441 - Federal Indian Policy and Native American Identity
SOC 492 - Work and Inequality
Other courses as approved by the director of the Ethics major

## European Literature, BA

## Contact:

Kathryn Everly
Languages, Literatures, and Linguistics
329 H.B. Crouse
315-443-2042

## Faculty

Jeffrey S. Carnes, Kathryn Everly, Ken Frieden, Alejandro Garcia, Stefano Giannini, Hope Glidden, Erika Haber, Matthieu H. van der Meer, Karina von Tippelskirch, Amy S. Wyngaard

## Students Seeking a B.A. in European Literature

Students seeking a B.A. in European literature take 36 credits in literature courses numbered above 250 , selected from two or three of the following areas: French, German, Greek, Italian, Latin, Russian, and Spanish. Courses may be distributed to include 18 credits in each of two different literatures or 12 in each of three literatures. Up to 6 credits in the literature of each area may be taken in translation, but the total of courses in literature in translation may not exceed 12 credits.

Study Abroad highly recommended at appropriate SU Abroad European centers.
For the European Literature major, each degree candidate will formulate in conjunction with
the faculty advisor or contact a personalized curriculum to fulfill the credit requirements.

## Fine Arts, BA

Theo Cateforis, Chair
Suite 308 Bowne Hall 315-443-4184

Amanda Eubanks Winkler, Undergraduate Director for Music History \& Cultures
Suite 308 Bowne Hall 315-443-4584

Romita Ray, Undergraduate Director for Art History
Suite 308 Bowne Hall
315-443-5030

## Faculty

Molly Bourne, Luis Castañeda, Theo Cateforis, Sally Cornelison, Laurinda Dixon, Rodney Foster, Wayne Franits, Jeehee Hong, Sydney Hutchinson, Richard Ingersoll, Bette Kahler, Matilde M. Mateo, Alick McLean, Stephen Meyer, Jonathan Nelson, Romita Ray, Sascha Scott
Students pursuing a degree in Fine Arts are required to complete 30 credits of coursework: 12 at the lower division and 18 at the upper division.

Lower division requirements (12 credits)

## History of Art and Music

HOM 125 - Introductory Music Theory
HOA 105 - Arts and Ideas I
HOA 106 - Arts and Ideas II
One of the courses from the following list
A 200-level HOM course may count by petition:
HOM 165 - Understanding Music I
HOM 166 - Understanding Music II
HOM 167 - Introduction to Music History
HOM 195 - Performance Live

## Upper division requirements (18 credits)

Students must take 6 courses at the 300 -level or above. 3 of these courses must be HOM and 3 of them must be HOA.

## Additional Information

Students may count 3 credits of studio art, music lessons or ensemble toward the upper division requirement. Students may petition to have 3 credits of appropriate coursework in art history
and 3 credits of appropriate coursework in music history taken outside the department (non-HOAHOM courses) count towards the fine arts major.

## Forensic Science, BA

## Integrated Learning Major In Forensic Science

## Contact:

Prof. Michael Sponsler
315 443-0326
forensics@syr.edu
Professionals in technically demanding fields are commonly asked to apply their expertise to other seemingly unrelated disciplines. As a result, they must have a comprehensive understanding of not only their own field, but also secondary knowledge of another broadly based, often interdisciplinary, field of study. A chemist might lend his or her expertise to a matter of legal or ethical importance. A curator might evaluate scientific and historical evidence about a painting's authenticity. A journalist might research a story involving science, medicine, and technology.
Integrated Learning Majors provide broad, interdisciplinary opportunities for students through valuable tools and knowledge in a variety of fields. This synergistic approach adds scholarly mettle to both the major and the interdisciplinary program, while exploiting their connective properties. For example, an undergraduate interested in chemistry could have an integrated learning program in forensic science. Or a student pursuing archeology could have an integrated learning major in ethics, with focus on social science research.

## Required:

GPA of at least 2.0; and complete all the requirements of one of the following majors: Anthropology, Biology, Biochemistry, Chemistry, Earth Sciences, Physics, Psychology, and Sociology. Other requisite majors will be considered based on student proposals that include appropriate connection courses and with the approval of the director.

## Required Entry Courses:

CHE 113 - Forensic Science
FSC 406 - Advanced Forensic Science
MAT 221 - Elementary Probability and Statistics I or

FSC 431 - Statistics for Forensic Science (PSY 252 may be taken instead by PSY majors)

## Connection Courses:

Must take one designated for the primary major ANT 433 - Human Osteology or

ANT 436 - Bioarchaeology (for ANT majors)
FSC 444 - Forensic Chemical Analysis or
BIO 326 - Genetics (for BIO, BCM majors)
FSC 444 - Forensic Chemical Analysis (for CHE, EAR, PHY majors)
PSY 474 - Forensic Psychology or
FSC 452 - Forensic Mental Health (for PSY majors)

SOC 334 - Criminal Justice or
SOC 397 - Criminology (for SOC majors)

## Electives:

Three courses; any FSC course may be used even if not listed; courses used for other requirements cannot be also counted as electives

ANT 433 - Human Osteology
ANT 434 - Anthropology of Death
ANT 436 - Bioarchaeology
BIO 326 - Genetics
BIO 462 - Molecular Genetics
CHE 335 - Chemical and Biochemical Analysis with Laboratory

CHE 575-Organic Spectroscopy
FSC - 300 Introduction to Forensic Anthropology
FSC 435 - Medicolegal Death Investigation I
FSC 440 - Special Topics in Advanced Forensics
FSC 444 - Forensic Chemical Analysis
FSC 451 - Forensic Pathology
FSC 452 - Forensic Mental Health
FSC 453 - Forensic Toxicology
FSC 457 - Principles of Human Toxicology
FSC 461 - Firearms and Impression Evidence
FSC 462 - Forensic Entomology
FSC 463 - Bloodstain Pattern Analysis
FSC 465 - Latent Prints
FSC 467 - Forensic Photography
FSC 468 - Crime Scene Investigation
FSC 490 - Independent Study
NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation
PSY 474 - Forensic Psychology
SOC 334 - Criminal Justice
SOC 397 - Criminology

Required Capstone
FSC 498 - Capstone Seminar in Forensic Science

## Total Credits 25 or 26

## Additional Information

This Integrative Learning Major is intended to provide a broad exposure to the field of forensic science, increasing employability in a variety of careers that relate to forensic science. However, this major will not generally be sufficient to prepare students for forensic laboratory positions unless it is paired with a chemistry, biochemistry, or biology major.

## Forensic Science, BS

## Integrated Learning Major In Forensic Science

## Contact:

Prof. Michael Sponsler
315 443-0326
forensics@syr.edu
Professionals in technically demanding fields are commonly asked to apply their expertise to other seemingly unrelated disciplines. As a result, they must have a comprehensive understanding of not only their own field, but also secondary knowledge of another broadly based, often interdisciplinary, field of study. A chemist might lend his or her expertise to a matter of legal or ethical importance. A curator might evaluate scientific and historical evidence about a painting's authenticity. A journalist might research a story involving science, medicine, and technology.

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## Required:

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## Required Entry Courses:

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ANT 434 - Anthropology of Death
ANT 436 - Bioarchaeology
BIO 326 - Genetics
BIO 462 - Molecular Genetics
CHE 335 - Chemical and Biochemical Analysis with Laboratory
CHE 575-Organic Spectroscopy
FSC - 300 Introduction to Forensic Anthropology
FSC 435 - Medicolegal Death Investigation I
FSC 440 - Special Topics in Advanced Forensics
FSC 444 - Forensic Chemical Analysis
FSC 451 - Forensic Pathology
FSC 452 - Forensic Mental Health
FSC 453 - Forensic Toxicology
FSC 457 - Principles of Human Toxicology
FSC 461 - Firearms and Impression Evidence
FSC 462 - Forensic Entomology
FSC 463 - Bloodstain Pattern Analysis
FSC 465 - Latent Prints
FSC 467 - Forensic Photography

FSC 468 - Crime Scene Investigation
FSC 490 - Independent Study
NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation
PSY 474 - Forensic Psychology
SOC 334 - Criminal Justice
SOC 397 - Criminology

## Required Capstone

FSC 498 - Capstone Seminar in Forensic Science

## Total Credits 25 or 26

## Additional Information

This Integrative Learning Major is intended to provide a broad exposure to the field of forensic science, increasing employability in a variety of careers that relate to forensic science. However, this major will not generally be sufficient to prepare students for forensic laboratory positions unless it is paired with a chemistry, biochemistry, or biology major.

## French and Francophone Studies, BA

## Contact:

Hope Glidden
Languages, Literatures, and Linguistics
340 H.B. Crouse
315-443-2175.

## Faculty

Hope Glidden, Jean Jonassaint, Amy S. Wyngaard
The B.A. in French and Francophone Studies enables students to become fluent in French and provides a broad knowledge of French and Francophone literature and culture. Lower-division courses emphasize the acquisition of language skills. Upper-division courses focus on developing language fluency and introducing students to a variety of critical approaches to analyzing French and Francophone literature and culture. FRE 202 is normally a prerequisite for advanced courses.

All students with any previous instruction in or experience with French are required to take a placement examination, available online through myslice, which is accessible via the department's website, with one's netid and password. This requirement applies to all students, regardless of class standing.
Students interested in majoring or minoring in French should consult the French and Francophone Studies major advisor as early
as possible. Early consultation is particularly important for students with little or no preparation in French so they may be sure to satisfy prerequisites and requirements within four years.

## Study Abroad

To become fluent in French and gain insight into a Francophone country and its people, students are encouraged to study abroad for a semester or a year in Syracuse's program in Strasbourg, France. Students take fully accredited courses abroad in language, literature, fine arts, history, political science, and other approved areas of study. In Option I, courses are taught at the Syracuse University center in both English and French. In Option II, students study at the Institute International d'Etudes Françaises, part of the Université Marc Bloch. In Option III students are directly placed at the Université Marc Bloch and Université Robert Schuman. For further information, contact the French program coordinator or Syracuse University Abroad, 106 Walnut Place.

## Major Requirements

The major in French and Francophone Studies consists of FRE 202 plus 27 upper-division credits taught in French. Students must complete at least 21 credits in upper-division FRE courses. At least 6 credits of 300 -level FRE courses must be taken before entering any 400-level FRE course. At least 12 credits of 400-level FRE courses are required for the major. Up to 6 upper-division credits may be taken outside of the French and Francophone Studies program in courses on related French or Francophone topics, with prior approval of the major advisor.

## Geography, BA

## Contact:

Jane Read Director of Undergraduate Studies
437 Crouse-Hinds Hall
315-443-4279

## Faculty

Jacob Bendix, Peng Gao, Matthew Huber, Natalie Koch, Susan W. Millar, Don Mitchell, Mark Monmonier, Anne E. Mosher, Thomas Perreault, Jane M. Read, David J. Robinson, Jonnell Robinson, Tod D. Rutherford, Farhana Sultana, John C. Western, Robert M. Wilson, Jamie L. Winders

Have you ever wondered why the world works the way it does? So do geographers, who study everything from economic, political, and cultural relations within and between countries, to
environmental practices of different people, to the physical and biological processes of the planet - in brief, the spatial aspects of human life and the natural environment. At Syracuse University, geographers study globalization, environmental change and history, mapping and spatial techniques, immigration, urban and cultural politics, social movements, and surface processes of the physical environment. As a major, geography gives you a range of skills AND a new perspective on the world. Because geographers research issues such as sustainable development, gender equity, and environmental change, geography provides tools not only to understand the world but also to change it!
Geography is easy to pair with another major, such as international relations or biology, or a degree from another college, such as the Newhouse School of Public Communications or Smith College of Engineering and Computer Science. After graduation, geography students find jobs in emergency management, federal and state environmental agencies, GIS and cartography, urban planning, non-profit organizations, community and international development, teaching and research, journalism, real-estate analysis, environmental consulting, and other fields. The Geography Department also offers research opportunities for undergraduates. Our majors work with community groups to address concerns like hunger, youth resources, and public transportation. They complete senior theses on topics from political change in East Africa to water management in Central America. Finally, majors can take advantage of internships or studyabroad opportunities to obtain course credits while gaining valuable work and international experience.

## Major Requirements

The program leading to a B.A. in geography requires at least 33 credits in geography, 21 of which must be at the upper division (i.e. 300 -level or above).

## Majors must take the following THREE lower-division courses:

GEO 103 - Environment and Society
GEO 155 - The Natural Environment GEO 171 - Human Geographies

Majors must take ONE of the following four techniques courses:
GEO 381 - Cartographic Design
GEO 383 - Geographic Information Systems GEO 386 - Quantitative Geographic Analysis GEO 482 - Environmental Remote Sensing

Majors must also complete the following capstone course:
GEO 491 - Senior Seminar in Geography
Majors are encouraged to concentrate the remainder of their credits in one of five tracks:

Environmental Systems and Landscape Dynamics
GEO 215 - Global Environmental Change
GEO 314 - Hazardous Geographic Environments
GEO 316 - River Environments
GEO 317 - Geography of Mountain Environments
GEO 318 - Tropical Environments
GEO 319 - Cold Environments
GEO 326 - The Geography of Climate and Weather
GEO 327 - Geography of Coastal Environments
GEO 400 - Selected Topics Geography of the Anthropocene
GEO 455 - Biogeography
GEO 583 - Environmental Geographical Information Science

Plus, Appropriate Topics Courses
GEO 200 - Selected Topics
GEO 300 - Selected Topics
GEO 400 - Selected Topics
GEO 500 - Topics in Geography
Nature, Society, Sustainability
GEO 203 - Society and the Politics of Nature
GEO 215 - Global Environmental Change
GEO 314 - Hazardous Geographic Environments
GEO 316 - River Environments
GEO 317 - Geography of Mountain Environments
GEO 318 - Tropical Environments
GEO 319 - Cold Environments
GEO 340 - Geography of Oil
GEO 353 - Geographies of Environmental Justice
GEO 354 - American Environmental History and Geography
GEO 356 - Environmental Ideas and Policy
GEO 358 - Animals and Society
GEO 360 - Sustainability Science and Policy
GEO 374 - Environment and Development in the Global South
GEO 400 - Selected Topics Geographies of Water

GEO 400 - Selected Topics Urban Environmental History
GEO 415 - Food: A Critical Geography
GEO 430 - Energy, History and Society

## Plus, Appropriate Topics Courses

GEO 200 - Selected Topics
GEO 300 - Selected Topics
GEO 400 - Selected Topics
GEO 500 - Topics in Geography

## Globalization, Development and Citizenship

GEO 105 - World Urban Geography
GEO 272 - World Cultures
GEO 273 - World Political Economy
GEO 311 - The New North Americas
GEO 321 - Latin American Development: Spatial Aspects
GEO 325 - Colonialism in Latin America
GEO 331 - The European Union
GEO 340 - Geography of Oil
GEO 361 - Global Economic Geography
GEO 367 - Gender in a Globalizing World
GEO 372 - Political Geography
GEO 374 - Environment and Development in the Global South
GEO 388 - Geographic Information and Society
GEO 400 - Selected Topics Geographies of Water
GEO 400 - Selected Topics The Greater Middle
East
GEO 425 - South Africa
GEO 430 - Energy, History and Society
GEO 440 - Race and Space
GEO 450 - Geographies of Migration and Mobility
GEO 463 - Geography of Homelessness
GEO 564 - Urban Historical Geography
GEO 573 - The Geography of Capital
GEO 595 - Geography and the Internet

## Plus, Appropriate Topics Courses

GEO 200 - Selected Topics
GEO 300 - Selected Topics
GEO 400 - Selected Topics
GEO 500 - Topics in Geography
Culture, Justice, and Urban Space
GEO 105 - World Urban Geography

GEO 219 - American Diversity and Unity (Honors)
GEO 272 - World Cultures
GEO 273 - World Political Economy
GEO 300 - Selected Topics Public Space and the City
GEO 311 - The New North Americas
GEO 313 - The United States
GEO 353 - Geographies of Environmental Justice
GEO 362 - The European City
GEO 367 - Gender in a Globalizing World
GEO 372 - Political Geography
GEO 400 - Selected Topics Urban Environmental History

GEO 415 - Food: A Critical Geography
GEO 425 - South Africa
GEO 440 - Race and Space
GEO 463 - Geography of Homelessness
GEO 484 - GIS for Urban Environments
GEO 485 - Community Geography
GEO 489 - Practicum in Community Geography
GEO 500 - Topics in Geography Geography of Memory

GEO 500 - Topics in Geography Urban and Regional Planning

GEO 564 - Urban Historical Geography
GEO 572 - Landscape Interpretation in Cultural Geography

GEO 573 - The Geography of Capital
GEO 576 - Gender, Place, and Space
Plus, Appropriate Topics Courses
GEO 200 - Selected Topics
GEO 300 - Selected Topics
GEO 400 - Selected Topics
GEO 500 - Topics in Geography
Geographic Information Science: Analysis, Modeling, and Applications
GEO 381 - Cartographic Design
GEO 383 - Geographic Information Systems
GEO 386 - Quantitative Geographic Analysis
GEO 388 - Geographic Information and Society
GEO 400 - Selected Topics Geospatial Technology and Privacy

GEO 482 - Environmental Remote Sensing
GEO 484 - GIS for Urban Environments
GEO 485 - Community Geography
GEO 500 - Topics in Geography GIS and

Hydrological Modeling
GEO 583 - Environmental Geographical Information Science

GEO 595-Geography and the Internet
Plus, Appropriate Topics Courses
GEO 200 - Selected Topics
GEO 300 - Selected Topics
GEO 400 - Selected Topics
GEO 500 - Topics in Geography

## Degree with Distinction

Majors who meet certain academic requirements have the opportunity to graduate with distinction. To do so, students must meet minimum GPA requirements, carry out original research under the supervision of a geography professor, and write a Senior Thesis based on that research. This honor recognizes a student's achievement of academic excellence and is acknowledged on the diploma.

German Language, Literature, and Culture, BA

## Contact:

Karina Von Tippelskirch
340 H.B. Crouse
315-443-2175
Kvontipp@syr.edu

## Faculty

Gerald R. Greenberg, Karina von Tippelskirch
This B.A. program offers instruction in German language, literature, and culture. GER 101, GER 102 (or the equivalent) are prerequisites for GER 201 and for advanced-level courses. Upperlevel courses provide in-depth study of German literature and culture and further development of linguistic skills.
All students with more than one year of high school German are required to take a placement examination. The requirement applies to all new Syracuse University students regardless of class standing or study elsewhere.
Students interested in studying German should consult the program coordinator of German as early as possible. Early consultation is particularly important for students with little or no preparation in German so they may be sure to satisfy prerequisites and requirements within four years.

## Major Requirements

The major in German consists of 27 credits including GER 202 plus at least eight upper-
division courses taught in German.

## Study Abroad

To become fluent in the language and experience the culture in the countries where German is spoken, students are strongly encouraged to study abroad for a semester or a year. Syracuse University's World Partner programs in Berlin, Freiburg and Graz enable students to take fully accredited classes in German language, literature and culture. The Freiburg Program, in collaboration with Colgate University, gives advanced German students the opportunity to take classes in German and in other fields of study such as history, international relations, journalism, and other electives in the arts and sciences. For further information, contact the German program coordinator or Syracuse University Abroad, 106 Walnut Place (http://suabroad.syr.edu).

## History of Architecture, BA

Theodore Philip Cateforis, Chair
308 Bowne Hall
315-443-4184
Matilde Mateo, Advisor
Department of Art and Music Histories
Suite 308 Bowne Hall
315-443-5035

## Faculty

Jean-François Bédard, Luis Castaneda, Lawrence Chua, Susan Henderson, Matilde M. Mateo, Romita Ray

## Major Requirements

To fulfill the requirements of the Major in Architectural History, students must complete 30 credits of upper-division courses. Of the 30 total credits, 24 should be on history of architecture from the list below, 9 of which should be HOA courses and 15 of which should be ARC courses. The remaining 6 credits can be from the list below or any upper-division HOA courses. No credit for studio courses in art or music may be used for this major. Students may petition to have up to 9 credits of selected topics courses in architectural history (ARC or HOA) count toward the major.

## Pre-Requisite:

HOA 105 - Arts and Ideas I and
HOA 106 - Arts and Ideas II
or
ARC 133 - Introduction to the History of Architecture I and
ARC 134 - Introduction to the History of Architecture II
(credits do not count towards the major)

## History of Architecture

The following courses offered by the School of Architecture (ARC) and the Department of Art and Music Histories (HOA) count as courses on History of Architecture:

## Primarily HOA courses

HOA 304 - Roman Art \& Architecture
HOA 396 - Art and Architecture of India
HOA 405 - The Mediterranean City: Architecture, Ritual and Power
HOA 410 - Art and Ideology in Medieval Spain
HOA 412 - The Gothic Spell
HOA 520 - Italian Urbanism: 100 Cities

## Primarily ARC courses

ARC 332 - Sixteenth Century Italian Architecture
ARC 334 - The Architecture of Revolutions
European Architecture from the Scientific to the Industrial Revolution

ARC 335 - Early Renaissance Architecture in Italy 1400-1529

ARC 336 - Italian Seventeenth Century Architecture

ARC 337 - American Architecture, Settlement to 1860
ARC 338 - American Architecture, 1860 - World War I

ARC 431 - Early Modern Architecture
ARC 432 - The City in Architectural History
ARC 433 - French Architecture, Sixteenth and Seventeenth Centuries

ARC 435 - Islamic Architecture
ARC 436 - Modern Architecture: The International Style to Present

## History, BA

## Contact:

The History Department Office
145 Eggers Hall
315-443-2210 or 9926
e-history@maxwell.syr.edu

## Faculty

Alan Allport, Susan Branson, Craige B. Champion, Andrew W. Cohen, Albrecht Diem, Michael R. Ebner, Carol Faulkner, Jeffrey Gonda, Paul M. Hagenloh, Samantha Kahn Herrick, Amy Kallander, George Kallander, Osamah F. Khalil, Radha Kumar, Norman A. Kutcher, Chris Kyle, Elisabeth D. LaschQuinn, Laurie Marhoefer, Gladys McCormick,

Dennis Romano, Mark G. Schmeller, Martin S. Shanguhyia, Junko Takeda, Margaret Susan Thompson
Understanding history-the record of what people have thought, said, and done-is essential in understanding the world of today. Students explore not only events of the past, but also how they were shaped by such factors as religion, economics, and geography and how these factors influence our own lives. The curriculum, which leads to a B.A. in history, also provides rigorous training in research, analysis, and writing.

Students majoring in history are encouraged to take a foreign language.

## Major Requirements

The major requires 30 credits in history, 21 of which are in junior- and senior-level courses numbered 300 or higher. Students take six credits in one of the following basic survey sequences:

HST 101 - American History to 1865 and
HST 102 - American History Since 1865
HST 111 - Early Modern Europe, 1350-1815 and
HST 112 - Modern Europe: Napoleon to the Present

HST 121 - Global History to 1750 and
HST 122 - Global History 1750 to Present
HST 210 - The Ancient World and
HST 211 - Medieval and Renaissance Europe

## Upper-division Credits

Of the 21 upper-division credits, 3 must be in HST 401 - Senior Seminar.

## Distribution requirement

The history department divides its course offerings into three broad categories: American, European, and Global. Students must take at least 3 credits (1 course) in each of these three areas.

## Concentration requirement

Each student must complete a concentration, consisting of 15 credits (5 courses), in one of the three distribution areas. Lower division survey courses and HST 401 can count toward this total. It is strongly encouraged, but not required, that both the lower division sequence and HST 401 fall within the student's area of concentration.

International Relations, BA

## Contact:

International Relations Program

225 Eggers Hall
315-443-2306
IR-Advisor@maxwell.syr.edu.

## Faculty

Alan Allport, Lamis Abdelaaty, Douglas V. Armstrong, Hossein Bashiriyeh, G. Matthew Bonham, Mehrzad Boroujerdi, Hans C. Buechler, John S. Burdick, Kristina Buzard, Horace Campbell, Frederick Carriere, Linda Carty, A.H. Peter Castro, Matthew R. Cleary, Goodwin Cooke, Francine D'Amico, David Kwame Dixon, Gavan Duffy, Michael R. Ebner, Colin Elman, Miriam Fendius Elman, Margarita Estévez-Abe, Cecilia Green, Dimitar Gueorguiev, Paul M. Hagenloh, Petra Hejnova, Azra Hromadzic, Matthew Huber, Seth Jolly, George Kallander, Osamah F. Khalil, Audie Klotz, Natalie Koch, Radha Kumar, Norman A. Kutcher, Mary E. Lovely, Amy Lutz, Laurie Marhoefer, Gladys McCormick, Daniel McDowell, Devashish Mitra, D. Glyn Morgan, Piyusha Mutreja, Terrell Northrup, Arthur Paris, Lourenço Paz, Deborah Pellow, Thomas Perreault, Robin Riley, David J. Robinson, Robert A. Rubinstein, Mark E. Rupert, Anoop Sadanandan, S.N. Sangmpam, Maureen Trudelle Schwarz, Yüksel Sezgin, Martin S. Shanguhyia, James B. Steinberg, Farhana Sultana, Junko Takeda, Brian D. Taylor, Stuart J. Thorson, Cecilia Van Hollen, Susan S. Wadley, John C. Western, Jamie L. Winders

The undergraduate major in international relations helps students develop the analytic, cultural, and linguistic skills needed to understand contemporary international affairs, to function effectively in a global environment, and to prepare for further academic or professional study and international career opportunities. This multidisciplinary program provides students with analytic tools and approaches from social science disciplines-anthropology, economics, geography, history, political science, and sociology-to explore current issues and to conceptualize global citizenship. For additional information, please consult our web page at http://www.maxwell.syr. edu/IR/

## Major Requirements

Requirements for the major include either 33 or 36 credits in international relations plus demonstrated proficiency in a contemporary spoken language other than English. Credits for internships in international relations, including internships abroad and IRP 471 - Global Internship in Washington, D.C., may be counted toward the major upon prior approval by the International Relations Program.

Each major must complete three (or four) introductory courses:
PSC 124 - International Relations or

PSC 139 - International Relations (Honors)
ECN 203 - Economic Ideas and Issues or

ECN 101 - Introductory Microeconomics and
ECN 102 - Introductory Macroeconomics
MAX 132 - Global Community or
ANT 185 - Global Encounters:Comparing World
Views \& Values Cross-Culturally

## To be Eligible to Declare the Undergraduate Major in International Relations

To be eligible to declare the undergraduate major in International Relations, students must achieve a grade of ' $B$ ' or better in at least one (1) of the three required introductory courses taken for the major at Syracuse University.

Of the 33 or 36 credits in the major, 21-24 credits must be in courses numbered 300 or above. Eighteen (18) of these credits are devoted to two concentrations within the major: 3 courses/ 9 credits are taken in a geographic region concentration in either Africa, Asia, Europe, Latin America and the Caribbean, or the Middle East and North Africa, and 3 courses/ 9 credits are taken in a topic concentration in either Intercultural Communication (ICC), International Security and Diplomacy (ISD), International Law and Organizations (ILO), or International Political Economy (IPE).

The remaining 6 credits must include one social science research methods course and an advanced seminar in which the student designs and implements a capstone research project. The methods course must be approved by the International Relations Program and should be appropriate to the student's capstone research project. The capstone research project must provide an original analysis of primary sources on an appropriately international theme, combining the student's topic and region concentrations, subject to approval by the faculty of the International Relations Program.

In addition to the 33 or 36 credits required in courses in international relations, each student major must demonstrate proficiency in a contemporary spoken language other than English. This language should be spoken in the geographic area chosen for the student's region concentration. Proficiency must be demonstrated by coursework to at least the level of Course IV (202) taught by the Syracuse University Department of Languages, Literatures, and Linguistics - http://lang.syr.edu or the equivalent. We strongly encourage students to continue language study to an advanced level of literacy and fluency. Students for whom English is a
second language must complete ENL 211 and ENL 213.
Graduation with a Bachelors of Arts degree in international relations requires an overall grade point average of 2.0 or higher in 24 credits of upper-division courses for the major, including a grade of 'C' or better for work undertaken to fulfill the senior capstone requirement.

## Additional Program Opportunities

International relations majors are expected to study abroad during their undergraduate program. Syracuse University Abroad (SU Abroad) offers a rich variety of courses that can be applied to the International Relations major requirements. Please see http://suabroad.syr.edu.
Participation in the Maxwell-in-Washington International Relations Semester, a 15-credit seminar and internship program, is recommended for all majors. For more information on this program, please contact the International Relations Programs office and see our webpage at http://www.maxwell.syr.edu/IR_Maxwell_in_DC/
Co-curricular activities, such as the International Relations Learning Community, a residential program for students new to Syracuse University, as well as our International Relations Honor Society Sigma lota Rho, Model United Nations Club and Team, International Relations Club, Conversations in International Relations speakers series, colloquia, and related activities, are available. Please see our webpage for more information. http://www.maxwell.syr.edu/ir/

The International Relations Program also offers minors in Global Political Economy and Global Security Studies. For more information, please see our "Affiliated Minors" webpage under "Academics" at http://www.maxwell.syr.edu/IR_affiliated_ minors/
Beginning in 2015-2016, students majoring in International Relations who meet the eligibility requirements will be invited to participate in the Distinction Program by the faculty of the International Relations Program. The Distinction Program enables students majoring in International Relations to engage in an enhanced research and mentoring experience. Working closely with a faculty member, Distinction candidates produce a research project of substantially greater depth than the capstone research project required of all International Relations majors. As with the capstone, the Distinction research project must combine the student's topic and region concentrations. In addition, the Distinction Program provides young scholars the skills and support needed to produce a project suitable for presentation at an academic conference or for publication in an undergraduate social science academic journal. For more
information, please see http://www.maxwell.syr. edu/ir/

## Italian Language, Literature and Culture, BA

## Contact:

Stefano Giannini

Languages, Literatures, and Linguistics
309 H.B. Crouse
315-443-2136.

## Faculty

Stefano Giannini
The major in Italian Ianguage, literature, and culture, which leads to a B.A. degree, provides students with a mastery of the language and a broad knowledge of Italian literature and culture. Lower-division courses teach the skills needed to read, write, and speak Italian. After the second year, students are trained to develop an oral and written command of the language. Literature and film studies cover areas of studies from Dante and the Renaissance to modern and contemporary periods.
All students with more than one year of high school Italian are required to take a placement examination (accessible on line via the "my slice" page), given immediately before registration each semester. The requirement applies to all students regardless of class standing or previous study.
Prospective majors should consult the Italian program coordinator as early as possible. Early consultation is particularly important for students with little or no preparation in Italian so they may be sure to satisfy prerequisites and requirements within four years.

## Study Abroad

Students studying Italian are strongly encouraged to spend a semester or a year abroad. Syracuse University's program in Florence, Italy, enables students to take fully accredited classes in Italian Ianguage and literature, fine arts, history, political science, and a number of electives outside arts and sciences. For students fluent in Italian, placements are available at the Centro per Stranieri at the University of Florence. For further information, contact the Italian program coordinator or Syracuse University Abroad, 106 Walnut Place.

## Major Requirements

A major in Italian consists of ITA 202 plus 24 credits in upper-division courses. Eighteen of the credits in upper-division courses are from courses taught in Italian; 6 of the credits may be in upper-
division courses taught in Italian, in English, or in English with readings in Italian as approved by the program advisor. LIT courses at the 200 level taught in English by Italian language faculty may be substituted for upper-division courses taught in English to satisfy the major requirements.

## Note:

*As approved by the program advisor.

## Latino-Latin American Studies, BA

Myrna Garcia, Director
mygarcia@syr.edu
310 H.B.C.
315-443-9489

## Faculty:

Doug Armstrong, Hans Buechler, Gail Bulman, John Burdick, Horace Campbell, Luis Castaneda, AH Peter Castro, Matt Cleary, Pedro Cuperman, Francine D'Amico, Geraldine de Berly, Pedro DiPietro, Kwame Dixon, Kathryn Everly, Stephanie Fetta, Alejandro Garcia, Bea Gonzalez, Martha Hanson, Dennis Harrod, Sydney Hutchinson, Amy Lutz, Gladys McCormick, Roberto Moreno, Arthur Paris, Jane Read, Alicia Rios, David Robinson, Silvio Torres-Saillant, Jamie Winder

The Latino-Latin American Studies program of the College of Arts and Sciences leads to the B.A. degree and embraces an interdisciplinary approach to culture, development, resources, history, and societies of these critical regions and their peoples. This recently modified and innovative program is designed to promote awareness and understanding of the many issues faced by the Latino and Latin American peoples of the western hemisphere. A wide range of faculty from several departments and with complementary perspectives provide a stimulating entry into the interrelated worlds of Latino America and Latin America.

## Major Requirements

Students are required to take 30 credits of coursework, 24 of which are in courses numbered above 299. Courses should be selected from the following list in consultation with the advisor. Additional courses in Anthropology, English and Textual Studies, History, History of Art, History of Music, Geography, Political Sciences and Spanish are recommended and may be petitioned for LAS credit in consultation with the program director.

## Anthropology

LAS 318 - South American Cultures
LAS 523 - Globalization and its Discontents in Latin America

## Political Science

LAS 333 - Politics of Latin America

## English

LAS 200 - Selected Topics Ethnic Literary Traditions (relevant courses)

ETS 230 - Topics in Ethnic Literary Traditions Ethnic Literary Traditions(relevant courses)
LAS 300 - Selected Topics Latino Fiction (relevant courses)

ETS 350 - Topics in Reading Nation and Empire Latino Fiction (relevant courses)

ETS 315 - Topics in Ethnic Literatures and Cultures Literature of the Caribbean Diaspora

## Geography

LAS 321 - Latin American Development: Spatial Aspects

LAS 325 - Colonialism in Latin America
LAS 520 - Research on Latin America

## History

LAS 322 - Colonial Latin America
LAS 313 - Modern Latin America
LAS 324 - Recent Latin American History
LAS 371 - Gender in Latin American History

## Spanish

LAS 300 - Selected Topics Approaches to Reading Texts (relevant courses)

LAS 302 - Introduction to Latin American Literature

LAS 433 - Business Spanish
LAS 461 - Nobel Prize Writers of the SpanishSpeaking World

LAS 463 - Contemporary Latin American Theater
LAS 465 - Literature and Popular Culture
LAS 467 - Film and Literature
LAS 471 - Contemporary Latin American Literature
LAS 475 - Women, Myth and Nation in Latin American Literature
LAS 479 - Perspectives on Mexico and Central America: Literature, Art, Film

LAS 481 - The Literature of Latinos in the United States

LAS 489 - Hispanic Caribbean Narrative and Film
LAS 493 - Afro-Hispanic Topics in Caribbean Literature

LAS 495 - Marginal Cultures in Hispanic Caribbean Literature

LAS 497 - Text and Context in Cuban Revolutionary Literature

## Additional Information

Additional courses may be petitioned with approval of advisor.

## Linguistic Studies, BA

## Contact

Jaklin Kornfilt
Director, Linguistic Studies
340 H.B. Crouse
315-443-5375.

## Faculty

Tej K. Bhatia, Amanda Brown, Richard W. Buttny, Kevan Edwards, Gerald R. Greenberg, Diane Grimes, Jaklin Kornfilt, Elizabeth D. Liddy, Amy Lutz, , Linda Milosky, Amardo Rodriguez, Robert A. Rubinstein, Maria Emma Ticio Quesada, Robert Van Gulick, Susan S. Wadley, Bei Yu

Linguistics is the study of the nature and use of language and provides insight into the workings of the human mind. The major ties together studies in many areas, such as anthropology, child and family studies, computer science, English and other languages, geography, literary criticism, mathematics, philosophy, psychology, sociology, speech communication, speech pathology, and linguistics proper.
LIN 201 is an introduction to linguistic studies and is a prerequisite to the major and to advanced courses. It does not, however, count toward major requirements.

## Major Requirements

Linguistic studies majors and prospective majors must consult the director of the program before registration.
Students must fulfill the Liberal Arts Core Language Skills requirement in one language and successfully complete at least 6 credits in an additional language (other than English) that is structurally significantly different from the language used to fulfill the Liberal Arts Core requirement. In addition, students successfully complete LIN 301 - Introductory Linguistic Analysis, LIN 431 - Phonological Analysis, and LIN 441 - Syntactic Analysis. Major requirements also include the successful completion of at least 18 credits of additional work, of which at least 9 credits are in courses numbered 300 or above. The 18 credits must be in approved linguistic studies courses, chosen from at least three of the following groups:

## Psychology and Biology of

 LanguageCFS 365 - Language Development in Children \& Families

COG 301 - Introduction to Cognitive Science
LIN 491 - Universal Grammar and Second Language Acquisition

LIN 591 - Second Language Acquisition
CSD 212 - Introduction to Communication Sciences and Disorders

CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms

CSD 316 - Introduction to Applied Phonetics
CSD 345 - Speech Science Fundamentals of Speech Science

CSD 409 - Cognitive Neuroscience of Speech and Language

## Language in Culture and Society

LIN 202 - Languages of the World
LIN 471 - Dimensions of Bilingualism and Multiculturalism

LIN 472 - Language, Culture, and Society
LIN 481 - Global Communication Through World Englishes
LIN 571 - Topics in Sociolinguistics
Logic and Language
PHI 251 - Logic
PHI 351 - Logic and Language
PHI 551 - Mathematical Logic
PHI 552 - Modal Logic
PHI 565 - Philosophy of Language
History and Structure of Language
LIN 202 - Languages of the World
LIN 251 - English Words
LIN 451 - Morphological Analysis
LIN 461 - Introduction to Historical Linguistics
SPA 436 - The Structure of Spanish

## Language Pedagogy

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching
LIN 422 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching

Mathematics Education (Dual), BS

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this

## requirement) (3 credits)

history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

[^4]taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

 (spring of the senior year)Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Mathematics Education

## Contact:

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In addition to the professional education requirements, students in mathematics education complete the Bachelor of Science in mathematics and the following requirements:

## Liberal Arts Core Specific Requirements

Mathematics education majors must complete the Liberal Arts Core curriculum with these additional
specific requirements:
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts related course within Arts and Sciences (HOA or HOM) or other approved humanities course focusing on one or more of the arts (3 credits)
One humanities course (cannot be history (HST) or arts related) (3 credits)

One multicultural humanities or social science course

## Two course sequence in calculusbased physics

PHY 211 - General Physics I
PHY 212 - General Physics II
PHY 221 - General Physics Laboratory I
PHY 222 - General Physics Laboratory II

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study

## Mathematics Content

The requirements for the B.S. in Mathematics must be completed ( 48 credits). Mathematics Education majors must follow the course requirement list below.
MAT 295 - Calculus I
MAT 375 - Introduction to Abstract Mathematics
MAT 296 - Calculus II
MAT 331 - First Course in Linear Algebra
MAT 397 - Calculus III
MAT 412 - Introduction to Real Analysis I
MAT 512 - Introduction to Real Analysis II
MAT 521 - Introduction to Probability
MAT 525 - Mathematical Statistics or
MAT 526 - Introduction to Stochastic Processes
MAT 531 - Second Course in Linear Algebra
MAT 534 - Introduction to Abstract Algebra
MAT 541 - Introduction to Number Theory
MAT 551 - Fundamental Concepts of Geometry
MAT 593 - History of Mathematics
One 400 level or higher mathematics course, by advisement (3 credits)

## Mathematics, BA

## Chair:

Uday Banerjee
215 Carnegie Building
315-443-1472

## Major Advisors:

S.P. Diaz, L. Kovalev, D. Zacharia.

## Faculty

Uday Banerjee, Pinyuen Chen, Dan Coman, J. Theodore Cox, Steven Diaz, Helen M. Doerr, Jack E. Graver, Philip S. Griffin, Peter D. Horn, Tadeusz Iwaniec, Hyune-Ju Kim, Mark Kleiner, Leonid Kovalev, Loredana Lanzani, Graham J. Leuschke, Adam Lutoborski, Joanna O. Masingila, Terry R. McConnell, Claudia Miller, Jani Onninen, Evgeny Poletsky, Declan Quinn, Lixin Shen, John Ucci, Gregory Verchota, Andrew Vogel, William Volterman, Yi (Grace) Wang, Stephan Wehrli, William Wylie, Yuan Yuan, Dan Zacharia

All students who plan to take any courses in mathematics should take the Mathematics Placement Examination. Those who do not pass the algebra portion of the test are advised to take MAT 112 as their first mathematics course.

Students who complete any calculus course numbered 284 or higher with a grade of C or better are exempt from the quantitative skills requirement. Otherwise, students may satisfy the quantitative skills requirement by passing two courses in an approved sequence, as described in the Liberal Arts Core Curriculum Handbook. Students who have been awarded credits in calculus on the basis of the CEEB Advanced Placement Examination may use those credits to satisfy this requirement.

There are two calculus sequences, MAT 285, MAT 286 and MAT 295, MAT 296, MAT 397. Advisors are available in the Department of Mathematics to assist students in the choice of the appropriate calculus sequence, which is very important since switching sequences is difficult. Furthermore, only one of MAT 284 or MAT 285 may be taken for credit. Students cannot receive credit for MAT 284 or MAT 285 after successful completion of MAT 295. Also, students cannot receive credit for MAT 295 after successful completion of MAT 286.

As a preliminary requirement for the mathematics major, students complete 18 credits in the following classes with no grade below a C: MAT 295, MAT 296, MAT 331, MAT 397, and MAT 375. These courses are prerequisites for most upper-division courses. The following sequence is recommended: MAT 295 in the first semester; MAT 296 in the second semester; MAT 331, MAT

397 in the third semester; and MAT 375 when appropriate. However, students with knowledge of trigonometry and a year of high school calculus may be able to enter the sequence at MAT 296 or even MAT 397; students with less preparation may be advised to complete MAT 194 before beginning the calculus sequence. Students considering becoming mathematics majors are strongly encouraged to talk to a mathematics major advisor as soon as possible. Computer science students (only) who have credit for CIS 375, and are pursuing a dual major in mathematics, need not take MAT 375.

Students who plan to pursue graduate study in mathematics should obtain the B.S. degree and consider taking at least one first-year graduate (600-level) course.

## B.A. Degree Requirements

In addition to the preliminary requirement described above, students are required to complete with an average of at least 2.0 and no grade below D, MAT 412 and 15 additional credits in upper division mathematics (MAT) courses numbered 400 or higher except 485, at least two of which are from a single one of the groupings below:

Analysis:
MAT 511 - Advanced Calculus
MAT 512 - Introduction to Real Analysis II
MAT 513 - Introduction to Complex Analysis
MAT 554 - Differential Geometry
MAT 562 - Elementary Topology

## Algebra:

MAT 531 - Second Course in Linear Algebra
MAT 534 - Introduction to Abstract Algebra
MAT 541 - Introduction to Number Theory

## Finite Mathematics:

MAT 531 - Second Course in Linear Algebra
MAT 541 - Introduction to Number Theory
MAT 545 - Introduction to Combinatorics
MAT 551 - Fundamental Concepts of Geometry

## Applied analysis:

MAT 414 - Introduction to Ordinary Differential Equations

MAT 517 - Partial Differential Equations and Fourier Series

MAT 518 - Fourier Series, Transforms and Wavelets
MAT 581 - Numerical Methods with Programming

Probability and Statistics:
MAT 521 - Introduction to Probability
MAT 525 - Mathematical Statistics
MAT 526 - Introduction to Stochastic Processes

## Additional Information

With consent of the advisor, these groupings may be altered.

## Mathematics, BS

## Chair:

Uday Banerjee
215 Carnegie Building
315-443-1472

## Major Advisors:

S.P. Diaz, L. Kovalev, D. Zacharia.

## Faculty

Uday Banerjee, Pinyuen Chen, Dan Coman, J. Theodore Cox, Steven Diaz, Helen M. Doerr, Jack E. Graver, Philip S. Griffin, Peter D. Horn, Tadeusz Iwaniec, Hyune-Ju Kim, Mark Kleiner, Leonid Kovalev, Loredana Lanzani, Graham J. Leuschke, Adam Lutoborski, Joanna O. Masingila, Terry R. McConnell, Claudia Miller, Jani Onninen, Evgeny Poletsky, Declan Quinn, Lixin Shen, John Ucci, Gregory Verchota, Andrew Vogel, William Volterman, Yi (Grace) Wang, Stephan Wehrli, William Wylie, Yuan Yuan, Dan Zacharia

All students who plan to take any courses in mathematics should take the Mathematics Placement Examination. Those who do not pass the algebra portion of the test are advised to take MAT 112 as their first mathematics course.

Students who complete any calculus course numbered 284 or higher with a grade of C or better are exempt from the quantitative skills requirement. Otherwise, students may satisfy the quantitative skills requirement by passing two courses in an approved sequence, as described in the Liberal Arts Core Curriculum Handbook. Students who have been awarded credits in calculus on the basis of the CEEB Advanced Placement Examination may use those credits to satisfy this requirement.

There are two calculus sequences, MAT 285, MAT 286 and MAT 295, MAT 296, MAT 397. Advisors are available in the Department of Mathematics to assist students in the choice of the appropriate calculus sequence, which is very important since switching sequences is difficult. Furthermore, only one of MAT 284 or MAT 285 may be taken for credit. Students cannot receive credit for MAT 284 or MAT 285 after successful completion of

MAT 295. Also, students cannot receive credit for MAT 295 after successful completion of MAT 286.

As a preliminary requirement for the mathematics major, students complete 18 credits in the following classes with no grade below a C: MAT 295, MAT 296, MAT 331, MAT 397, and MAT 375. These courses are prerequisites for most upper-division courses. The following sequence is recommended: MAT 295 in the first semester; MAT 296 in the second semester; MAT 331, MAT 397 in the third semester; and MAT 375 when appropriate. However, students with knowledge of trigonometry and a year of high school calculus may be able to enter the sequence at MAT 296 or even MAT 397; students with less preparation may be advised to complete MAT 194 before beginning the calculus sequence. Students considering becoming mathematics majors are strongly encouraged to talk to a mathematics major advisor as soon as possible. Computer science students (only) who have credit for CIS 375, and are pursuing a dual major in mathematics, need not take MAT 375.

Students who plan to pursue graduate study in mathematics should obtain the B.S. degree and consider taking at least one first-year graduate (600-level) course.

## B.S. Degree Requirements

Students interested in pursuing the B.S. degree in mathematics obtain, in advance, the approval of a mathematics major advisor and the department chair of a petition to the effect that the upper-division courses to be taken satisfy the requirement for a B.S. degree.

## In Addition to the Preliminary Requirement

In addition to the preliminary requirement described above, the student is required to complete the following coursework with an average of at least 2.0 and no grade below a D:
MAT 412 - Introduction to Real Analysis I (analysis sequence)

MAT 512 - Introduction to Real Analysis II (analysis sequence)

MAT 531 - Second Course in Linear Algebra (algebra sequence)
MAT 534 - Introduction to Abstract Algebra (algebra sequence)
MAT 521 - Introduction to Probability (probability and statistics)

## And at least one of these:

MAT 414 - Introduction to Ordinary Differential Equations (differential equations) or

MAT 551 - Fundamental Concepts of Geometry
(geometry)

## 12 Additional Credits in Mathematics

And 12 additional credits in mathematics (MAT) courses numbered 490 or higher. With prior approval of the mathematics major advisor, a student may substitute another MAT course numbered 490 or higher for the MAT 412 requirement. Up to 6 credits in advanced courses in other departments that have been approved in advance by the student's major advisor may be included in the 12 credits.

## Distinction in Mathematics

Distinction in Mathematics is awarded by the Mathematics Department upon completion of a B.S. in mathematics with a minimum cumulative GPA of 3.4 , a minimum GPA of 3.6 in mathematics (MAT) courses at the 300+ level, and either an A or A- in the Senior Seminar or a high-quality Honors Thesis. See the Mathematics Department undergraduate advisor for additional requirements.

## Middle Eastern Studies, BA

## Program Director:

Yüksel Sezgin
100 Eggers Hall
315-443-4431
mes@maxwell.syr.edu

## Faculty

Ahmed E. Abdel-Meguid, Hossein Bashiriyeh, Mehrzad Boroujerdi, Zachary J. Braiterman, Miriam Fendius Elman, Carol Fadda-Conrey, Ken Frieden, Rania Habib, Susan Henderson, Amy Kallander, Tazim R. Kassam, Osamah F. Khalil, Amos Kiewe, Natalie Koch, Jaklin Kornfilt, Sandra D. Lane, Dana M. Olwan, Kara Richardson, Robert A. Rubinstein, Ossama "Sam" Salem, Yüksel Sezgin, James W. Watts

The Middle Eastern Studies Program provides students with the opportunity to study the languages, history, culture, religions and politics of the Middle East. Overseen by the College of Arts \& Sciences and the Moynihan Institute of Global Affairs at the Maxwell School, the MESP brings together faculty members from many departments including Anthropology, Architecture, Art and Music Histories, English and Textual Studies, Geography, Health and Wellness, History, International Relations, Language, Literature, and Linguistics, Law, Philosophy, Political Science, Religion and Women's and Gender Studies.

This interdisciplinary major, leading to a B.A. in Middle Eastern Studies, requires 36 credits in Middle Eastern Studies courses. The major will require students to complete (a) three core courses, (b) three consecutive semesters in one of the regional languages (Arabic, Hebrew, Persian, and Turkish), (c) two lower division courses and (d) three upper division courses. The Major is open to all undergraduates who have completed at least two Middle Eastern content courses (one of which can be a language course) and have a GPA of 2.8 or better. Prospective majors must meet with the Program Director before submitting a major application. At least 18 of the 36 credits required for the major should be in courses numbered above 299. A maximum of six credits of independent study can be applied to the major by petition. Experience credit courses (i.e., internships) may not be used to satisfy the requirements of the major.

## Required Core Courses (choose

 three courses, 9 credits)
## Language Category (three

 consecutive courses, 12 credits):
## Lower Division Courses (two

 courses, 6 credits):
## Upper Division Courses (three courses from across at least two different departments, 9 credits)

MES 315 - Arab American Literature and Culture Arab American Literature and Culture

MES 350 - Gender, Violence, and Sexualities in the "War on Terror"

MES 360 - Reading Gender and Sexualities: Gender and Sexuality in the Arab World
WGS 453 - Feminisms, Sexualities, and Human
Rights in Middle Eastern Societies

## Required Core Courses (choose

three courses, 9 credits)
MES 318 - The Middle East to 1900
MES 344 - Politics of the Middle East
Senior Seminar in Middle Eastern
Studies, including but not limited to:
MES 430 - Senior Seminar in Middle Eastern Studies

MES 468 - Middle East in Anthropological Perspective

MES 707 - Culture and World Affairs
ARC 435 - Islamic Architecture

MES 644 - Israel \& Palestine: Historical Approaches

REL 607 - Ancient Religious Rhetoric
REL 625 - Pluralism in Islam
REL 628 - Muslim Rituals, Practices, and Performances

REL 676 - Religion and Judaic Literature
MES 682 - Social Theory \& Middle East Politics
MES 684 - International Relations of the Middle East

## Language Category (three

 consecutive courses, 12 credits):ARB 101 - Arabic I
ARB 102 - Arabic II
ARB 201 - Arabic III
ARB 202 - Arabic IV
ARB 301 - Arabic V
ARB 302 - Arabic VI
PRS 101 - Persian I
PRS 102 - Persian II
PRS 201 - Persian III
PRS 202 - Persian IV
HEB 101 - Hebrew I
HEB 102 - Hebrew II
HEB 201 - Hebrew III
HEB 202 - Hebrew IV
HEB 301 - Advanced Hebrew I
HEB 303 - Advanced Hebrew II
TRK 101 - Turkish I
TRK 102 - Turkish II
TRK 201 - Turkish III
TRK 202 - Turkish IV
Lower Division Courses (two courses, 6 credits):
ARB 202 - Arabic IV
HEB 202 - Hebrew IV
ETS 235 - Classics of World Literature I
PRS 202 - Persian IV
REL 107 - Religion, Literature, Film
REL 114 - The Bible
REL 131 - Great Jewish Writers
REL 135 - Judaism
REL 165 - Discovering Islam
REL 215 - The Hebrew Bible

REL 217 - The New Testament
REL 231 - Jewish Literature
REL 261 - Faith and Reason in Islamic Thought and Civilization

TRK 202 - Turkish IV
Upper Division Courses (three courses from across at least two different departments, 9 credits)

MES 382 - Health in the Middle East
MES 468 - Middle East in Anthropological Perspective

MES 707 - Culture in World Affairs
ARB 301 - Arabic V
ARB 302 - Arabic VI
ARC 435 - Islamic Architecture
ETS 410 - Topics in Forms and Genres or
MES 406 - The Middle East in Graphic Novels
MES 315 - Arab American Literature and Culture
HEB 301 - Advanced Hebrew I
HEB 401 - Hebrew Literature in the Original
MES 386 - Sounds of the Silk Road
MES 318 - The Middle East to 1900
MES 319 - The Middle East in the 20th Century
MES 368 - Islam and the West
HST 379 - Gender, Race, and Colonialism
MES 644 - Israel and Palestine: Historical Approaches

HUM 404 - 'AZAHAR’ The Islamic Conquest and the Christian Reconquest

MES 336 - Arabic Cultures
MES 350 - Gender, Violence, and Sexualities in the "War on Terror"

MES 360 - Reading Gender and Sexualities: Gender and Sexuality in the Arab World

MES 495 - Distinction Thesis in Middle East Studies

PHI 308 - Classical Islamic Philosophy
MES 342 - Religion and Politics in the IsraeliPalestinian Conflict

MES 344 - Politics of the Middle East
MES 345 - Islam and Politics in Asia
MES 349 - Politics of Iran
PSC 362 - Religion, Identity and Power
MES 366 - Representations of the Middle East
MES 367 - Oil, Water and War
MES 368 - Islam and the West

MES 391 - Revolutions in the Middle East
MES 392 - Islamism and Islamist Movements Today

MES 393 - Middle Eastern Political Systems
MES 394 - History of Islamic Political Thought
MES 395 - Democratization in the Muslim World
MES 682 - Social Theory and Middle East Politics
MES 684 - International Relations of the Middle East
REL 301 - Ancient Near Eastern Religions and Cultures

REL 307 - The Temple and the Dead Sea Scrolls
MES 308 - Ancient Judaism and the Origins of Christianity

REL 311 - The Bible as Literature
MES 321 - Christians, Jews and Muslims
REL 334 - Modern Judaism
REL 335 - Israeli Literature and Culture
MES 364 - Enchanting Words: Muslim Poets, Singers and Storytellers

MES 365 - God and Beauty in Islamic Art
REL 435 - Modern Jewish Thought
MES 465 - Beyond the Veil: Gender Politics in Islam
REL 607 - Ancient Religious Rhetoric
REL 625 - Pluralism in Islam
REL 628 - Muslim Rituals, Practices, and Performances

REL 676 - Religion and Judaic Literature
WGS 453 - Feminisms, Sexualities, and Human
Rights in Middle Eastern Societies

## Modern Foreign Language, BA

## Contact:

## Gail Bulman

Associate Professor of Spanish
340 H.B. Crouse
315-443-5385
gabulman@syr.edu

## Major Requirements

The major requires 36 credits in courses numbered 202 and above in two of the following languages: French, German, Italian, Russian, and Spanish. Normally students will take 18 credits in each of the two languages. However, they may petition to take 21 credits in one language and 15 in the other.

Modern Foreign Language majors are strongly encouraged to spend a semester or a year abroad.

## Modern Jewish Studies, BA

Zachary J. Braiterman, Director
zbraiter@syr.edu
501 Hall of Languages
315-443-5719

## Faculty

Zachary J. Braiterman, Erella Brown, Miriam Fendius Elman, Ken Frieden, Sanford Sternlicht, Harvey Teres, Laurence Thomas, James W. Watts
This interdisciplinary major explores Modern Jewish culture and religion. Faculty research and teaching focus on the Hebrew and Yiddish fiction, European and American literature, Jews and Judaism in modern Europe and America, the arts, thought and culture, Israel, and the PalestinianIsraeli conflict. The major provides broad, interdisciplinary knowledge of Jewish experience both historical and contemporary, and is meant to prepare students for further pursuits in Jewish culture, history, and religion upon graduation, either academically or in private life. The Jewish Studies Program offers courses and advising to students, and a range of events (lectures, films, musical performances, etc.) for students, faculty, and the larger community. Graduate students are eligible to apply for the Benjamin Fellowship, and all students may submit Holocaust-related papers to the undergraduate and graduate Kalina Prize competition.

## Major Requirements

The major requires 24 credits of appropriate work. Because of the interdisciplinary character of Jewish Studies courses, it is crucial that the following clusters be delineated and approved in consultation with the Director.

## 1. Students take two courses selected from

JSP 114 - The Bible
JSP 131 - Great Jewish Writers
JSP 135 - Judaism
JSP 215 - The Hebrew Bible
JSP 231 - Jewish Literature

## 2. Upper-Division Courses

Students will demonstrate proficiency at the level of HEB 202 (by way of coursework or a placement exam), and will take 18 credits in the following HEB and/or JSP upper-division courses. Among these courses students are required to take the Judaic Studies Senior Seminar (JSP 439/REL 439).

JSP 307 - The Temple and the Dead Sea Scrolls
JSP 311 - The Bible as Literature

JSP 331 - European and American Jewish Literature

JSP 333 - Yiddish Literature in Translation
JSP 334 - Modern Judaism
JSP 335 - Israeli Literature and Culture
JSP 337 - Shoah: Responding to the Holocaust
JSP 435 - Modern Jewish Thought
JSP 439 - Jewish Studies Seminar
JSP 490 - Independent Study
HEB 301 - Advanced Hebrew I
HEB 303 - Advanced Hebrew II
HEB 401 - Hebrew Literature in the Original

## Music History and Cultures, BA

Theo Cateforis, Chair
308 Bowne Hall
315-443-4184
Amanda Winkler, Director of Undergraduate Studies
308 Bowne Hall
315-443-4584

## Faculty

Carol Babiracki, Theo Cateforis, Rodney Foster, Sydney Hutchinson, Bette Kahler, Stephen Meyer, Amanda Winkler

The major in Music History and Cultures is designed for students who wish to study music in its historical, social and cultural contexts and in relation to other arts. Although majors are encouraged to develop performance skills, the focus of the degree is on the study of musical cultures and styles in a liberal arts environment.

## Lower Division Requirements (14 credits)

## 1) Musical skills (8 credits)

Students are required to demonstrate competency in basic musical skills by successfully completing the first-year music theory sequence (MTC 145 and MTC 146), and the corresponding firstyear ear training sequence (MTC 147 and MTC 148).

MTC 145 - Diatonic Harmony I
MTC 146 - Diatonic Harmony II
MTC 147 - Ear Training I
MTC 148 - Ear Training II

## 2) Introduction to music history and culture ( 6 credits)

Students are required to complete two courses
from the following list. One of these two courses must be from the European music history sequence (HOM 167 , HOM 267, HOM 268
HOM 165 - Understanding Music I
HOM 166 - Understanding Music II
HOM 167 - Introduction to Music History
HOM 195 - Performance Live
HOM 267 - European Music from 1750-1914
HOM 268 - European and American Music Since 1914
HOM 285 - Introduction to World Music

## Upper Division Requirements (18 credits)

## 1) Breadth requirement ( 9 credits)

Students must complete at least one upperdivision course in European Music (HOM 360s, 460 s, 560 s) and two courses from among the following areas: Music and Technology (HOM 310s, 410s, 510 s), Latin American Music (HOM $320 \mathrm{~s}, 420 \mathrm{~s}, 520 \mathrm{~s}$ ), Music and Dance (HOM 350 s, 450 s, 550 s), American Music (HOM 370s, 470s, 570s), and Ethnomusicology/World Music (HOM 380s, 480s, 580s). Students cannot take both non-European music courses in the same area.

## 2) Major electives (6 credits)

Students must take at least 6 additional upper-division credits. 3 of these credits may be earned in non-music HOA courses (i.e. art history or history of architecture). Candidates for departmental honors (see below) may use HOM 496 (3 credits) to count toward the fulfillment of this requirement.

## 3) Upper-Division Requirements

Students must fulfill at least one of these upperdivision requirements with a 500 -level course.

## 4) Junior Seminar: Musicology in Action

This course, required of all Music History and Culture majors, will normally be offered each spring semester. The specific content of the course will vary from year to year, but its purpose will remain the same; to stimulate critical thought about music and to hone our students' research and writing skills.

HOM 396 - Junior Seminar: Musicology in Action

## 5) Distinction in Music History and Cultures

( 3 credits, required only for students earning a
degree with distinction). Majors who have earned a cumulative GPA of at least 3.4 and a cumulative departmental GPA of at least 3.7 will be invited to earn a degree with distinction. In order to earn this honor, students are required to enroll in HOM 496. These students will work independently, under the supervision of a faculty member, to complete a large-scale project in some aspect of music history or cultures. Students will determine the topic for their Distinction Project in consultation with a thesis advisor, whom they will chose from among the Music History and Culture faculty (in exceptional cases other faculty may serve in this capacity). The thesis will also be evaluated by a second reader, chosen by the thesis advisor (in consultation with the student) from other faculty in Music History and Cultures or related disciplines. In most cases, the project will take the form of a formal essay approximately 6000 words in length. Alternative types of projects are also possible, provided that they meet with the approval of the Music History and Cultures faculty. Regardless of the topic, the project should constitute original work, serving as a persuasive demonstration of the student's skills and talents as well as a vivid component of the student's credentials.

HOM 496 - Distinction Project in Music History and Cultures

## Performance Requirements (812 credits)

In addition to the course requirements listed above, students in the B. A. in Music History and Cultures program are required to complete at least four semesters of individual studio lessons. Students are also required to participate in a Syracuse University performing ensemble for at least four semesters. These requirements may be fulfilled at any point in the degree program.
Students may petition to have up to 6 credits of appropriate courses in music history taken outside the department (non-HOM courses) count toward the music history and cultures major.

Neuroscience, BA
Integrated Learning Major in Neuroscience

## Contact:

Natalie Russo
Psychology
430 Huntington Hall
nrusso@syr.edu
Or
Sandra Hewett
Biology

107 College Place Room 110
shewett@syr.edu
Professionals in technically demanding fields are commonly asked to apply their expertise to other seemingly unrelated disciplines. As a result, they must have a comprehensive understanding of not only their own field, but also secondary knowledge of another broadly based, often interdisciplinary, field of study. A chemist might lend his or her expertise to a matter of legal or ethical importance. A curator might evaluate scientific and historical evidence about a painting's authenticity. A journalist might research a story involving science, medicine, and technology.

Integrated Learning Majors provide broad, interdisciplinary opportunities for students through valuable tools and knowledge in a variety of fields. This synergistic approach adds scholarly mettle to both the major and the interdisciplinary program, while exploiting their connective properties. For example, an undergraduate interested in chemistry could have an integrated learning program in forensic science. Or a student pursuing archeology could have an integrated learning major in ethics, with focus on social science research.

Majors in the integrated learning major in Neuroscience will integrate with: Biochemistry, Biology, Communication Sciences \& Disorders (CSD), Linguistics, Philosophy, Physics and Psychology) and two majors in Engineering and Computer Sciences (Bioengineering and Chemical Engineering).

## Requirements:

An overall GPA of at least 2.0; a GPA of no lower than 3.0 in the 24 credit hours counting towards the Neuroscience IL Major, a grade no lower than "B-" in the two required entry level courses (BIO 211 and PSY 223) and students must successfully complete all of the requirements necessary to obtain a major in one of the following majors: Biochemistry, Biology, Communication Sciences \& Disorders (CSD), Linguistics, Philosophy, Physics and Psychology) and two majors in Engineering and Computer Sciences (Bioengineering and Chemical Engineering). Other requisite majors may also be possible with approval of director.

## Required Entry Courses:

6 credits (Grade of B- or better required in these two entry courses)

NEU 211 - Introduction to Neuroscience
PSY 223 - Introduction to Cognitive Neuroscience

## Required courses:

Intersection of Mind and Brain; 9 credits
PSY 322 - Cognitive Psychology or

NEU 301 - Introduction to Cognitive Science
CSD 409 - Cognitive Neuroscience of Speech and Language
NEU 407 - Advanced Neuroscience

## Elective Courses:

6 credits chosen from the courses listed below. Two courses must be thematically related to one another and from fields other than the students primary major. Courses with the same prefix are presumed to be thematically-related. Other courses may be paired as thematically-related with permission of the student's advisor.

## Biology

BIO 326 - Genetics
BIO 327 - Cell Biology
BIO 417 - Animal Behavior and Evolutionary Biology Laboratory

BIO 437 - Seminar in Developmental Neuroscience

## Communication Sciences \& Disorders

CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms

CSD 325 - Fundamentals of Hearing Sciences
CSD 345 - Speech Science (prereq: CSD 315)
CSD 422 - Development of Speech and Language
CSD 429 - Basic Clinical Audiology

## Linguistics

LIN 301 - Introductory Linguistic Analysis (prereq: LIN 201)

LIN 431 - Phonological Analysis
LIN 441 - Syntactic Analysis
LIN 451 - Morphological Analysis
LIN 491 - Universal Grammar and Second Language Acquisition (prereq: LIN 301)
LIN 571 - Topics in Sociolinguistics

## Mathematics

MAT 397 - Calculus III
MAT 331 - First Course in Linear Algebra
MAT 485 - Differential Equations and Matrix Algebra for Engineers

## Philosophy

PHI 378 - Minds and Machines (prereq: any PHI or computer science course)

PHI 373 - Introduction to the Philosophy of Science (prereq: PHI 107, PHI 251, or PHI 551)

PHI 375 - Philosophy of Biology:What Can

Evolution Explain? (prereq: 1 PHI and 1 BIO course)

PHI 377 - Philosophy of Psychology (prereq: PSY 205)

PHI 533 - Philosophy of Mind

## Physics

PHY 307 - Science and Computers I
PHY 308 - Science and Computers II (prereq: PHY 307 and MAT 285/MAT 286 or MAT 295/MAT 296)

PHY 315 - Biological and Medical Physics
PHY 360 - Vibrations, Waves and Optics
PHY 444 - Soft Matter (prereq: any 300-level MAT or physical science course)
PHY 531 - Thermodynamics and Statistical Mechanics

## Psychology

PSY 315 - Drugs and Human Behavior
PSY 321 - Introduction to Sensation and Perception
PSY 323 - Brain and Behavior
PSY 324 - Developmental Biopsychology
PSY 331 - Laboratory in Sensation and Perception (prereq: PSY 313, coreq or prereq PSY 321)
PSY 332 - Laboratory in Cognitive Psychology
PSY 334 - Laboratory in Developmental Biopsychology

PSY 373 - Human Memory (prereqs: PSY 205, PSY 322)
PSY 382 - Health Psychology
PSY 392 - Stress and Health
PSY 426 - Cognitive Neurochemistry
PSY 437 - Cognition and Aging
Biomedical and Chemical Engineering
BEN 364 - Quantitative Physiology (prereq: BEN 305)

BEN 458 - Biomedical Imaging
Engineering and Computer Sciences
ELE 351 - System and Signal Analysis
ELE 352 - Digital Signal Processing
Required Capstone Course: 3 credits
PSY 496 - Neuroscience and Society
Neuroscience, BS
Integrated Learning Major in

## Neuroscience

## Contact:

Natalie Russo
Psychology
430 Huntington Hall
nrusso@syr.edu
Or
Sandra Hewett
Biology
107 College Place Room 110
shewett@syr.edu
Professionals in technically demanding fields are commonly asked to apply their expertise to other seemingly unrelated disciplines. As a result, they must have a comprehensive understanding of not only their own field, but also secondary knowledge of another broadly based, often interdisciplinary, field of study. A chemist might lend his or her expertise to a matter of legal or ethical importance. A curator might evaluate scientific and historical evidence about a painting's authenticity. A journalist might research a story involving science, medicine, and technology.
Integrated Learning Majors provide broad, interdisciplinary opportunities for students through valuable tools and knowledge in a variety of fields. This synergistic approach adds scholarly mettle to both the major and the interdisciplinary program, while exploiting their connective properties. For example, an undergraduate interested in chemistry could have an integrated learning program in forensic science. Or a student pursuing archeology could have an integrated learning major in ethics, with focus on social science research.
Majors in the integrated learning major in Neuroscience will integrate with: Biochemistry, Biology, Communication Sciences \& Disorders (CSD), Linguistics, Philosophy, Physics and Psychology) and two majors in Engineering and Computer Sciences (Bioengineering and Chemical Engineering).

## Requirements:

An overall GPA of at least 2.0; a GPA of no lower than 3.0 in the 24 credit hours counting towards the Neuroscience IL Major, a grade no lower than "B-" in the two required entry level courses (BIO 211 and PSY 223) and students must successfully complete all of the requirements necessary to obtain a major in one of the following majors: Biochemistry, Biology, Communication Sciences \& Disorders (CSD), Linguistics, Philosophy, Physics and Psychology) and two majors in Engineering and Computer Sciences (Bioengineering and Chemical Engineering). Other requisite majors may also be possible with approval of director.

## Required Entry Courses:

6 credits (Grade of B- or better required in these two entry courses)
NEU 211 - Introduction to Neuroscience
PSY 223 - Introduction to Cognitive Neuroscience

## Required courses:

Intersection of Mind and Brain; 9 credits
PSY 322 - Cognitive Psychology or
NEU 301 - Introduction to Cognitive Science
CSD 409 - Cognitive Neuroscience of Speech and Language
NEU 407 - Advanced Neuroscience

## Elective Courses:

6 credits chosen from the courses listed below. Two courses must be thematically related to one another and from fields other than the students primary major. Courses with the same prefix are presumed to be thematically-related. Other courses may be paired as thematically-related with permission of the student's advisor.

## Biology

BIO 326 - Genetics
BIO 327 - Cell Biology
BIO 417 - Animal Behavior and Evolutionary Biology Laboratory

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## Communication Sciences \& Disorders

CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms
CSD 325 - Fundamentals of Hearing Sciences
CSD 345 - Speech Science (prereq: CSD 315)
CSD 422 - Development of Speech and Language
CSD 429 - Basic Clinical Audiology

## Linguistics

LIN 301 - Introductory Linguistic Analysis (prereq: LIN 201)

LIN 431 - Phonological Analysis
LIN 441 - Syntactic Analysis
LIN 451 - Morphological Analysis
LIN 491 - Universal Grammar and Second Language Acquisition (prereq: LIN 301)

LIN 571 - Topics in Sociolinguistics
Mathematics
MAT 397 - Calculus III
MAT 331 - First Course in Linear Algebra

MAT 485 - Differential Equations and Matrix Algebra for Engineers

Philosophy
PHI 378 - Minds and Machines (prereq: any PHI or computer science course)

PHI 373 - Introduction to the Philosophy of Science (prereq: PHI 107, PHI 251, or PHI 551)

PHI 375 - Philosophy of Biology:What Can Evolution Explain? (prereq: 1 PHI and 1 BIO course)

PHI 377 - Philosophy of Psychology (prereq: PSY 205)

PHI 533 - Philosophy of Mind

## Physics

PHY 307 - Science and Computers I
PHY 308 - Science and Computers II (prereq: PHY 307 and MAT 285/MAT 286 or MAT 295/MAT 296)

PHY 315 - Biological and Medical Physics
PHY 360 - Vibrations, Waves and Optics
PHY 444 - Soft Matter (prereq: any 300-level MAT or physical science course)

PHY 531 - Thermodynamics and Statistical Mechanics

## Psychology

PSY 315 - Drugs and Human Behavior
PSY 321 - Introduction to Sensation and Perception

PSY 323 - Brain and Behavior
PSY 324 - Developmental Biopsychology
PSY 331 - Laboratory in Sensation and Perception (prereq: PSY 313, coreq or prereq PSY 321)

PSY 332 - Laboratory in Cognitive Psychology
PSY 334 - Laboratory in Developmental Biopsychology

PSY 373 - Human Memory (prereqs: PSY 205, PSY 322)
PSY 382 - Health Psychology
PSY 392 - Stress and Health
PSY 426 - Cognitive Neurochemistry
PSY 437 - Cognition and Aging
Biomedical and Chemical Engineering
BEN 364 - Quantitative Physiology (prereq: BEN 305)

BEN 458 - Biomedical Imaging
Engineering and Computer Sciences

ELE 351 - System and Signal Analysis
ELE 352 - Digital Signal Processing
Required Capstone Course: 3 credits
PSY 496 - Neuroscience and Society

## Philosophy, BA

## Contact:

Director of Undergraduate Studies
541 Hall of Language
315-443-2245.

## Faculty

Kenneth Baynes, Frederick C. Beiser, Benjamin Bradley, Janice Dowell, Kevan Edwards, Kim Frost, André Gallois, Samuel Gorovitz, Mark Heller, Kris McDaniel, Hille Paakkunainen, Kara Richardson, Michael Rieppel, Nathaniel Sharadin, David Sobel, Laurence Thomas, Robert Van Gulick

## Description

Using reason and argument, philosophers seek to answer the most fundamental of questions: What am I? What can I know? What must I do? Because the study of philosophy so effectively sharpens and extends the mind, many students find it to be the ideal companion to other courses of study.
The philosophy curriculum has two principal divisions. The first division consists of studies that are central to philosophy proper. There are four core areas: ethics, logic, metaphysics and the theory of knowledge, and the history of philosophy. The second division includes courses devoted to the philosophical examination of other areas of inquiry and culture, such as mathematics, the natural and social sciences, language, politics and the law, the arts, history, education, and religion.
Students particularly interested in political philosophy should see the program description under that heading here. Students particularly interested in logic should see the description of the logic concentration, included under "Interdisciplinary Minors" in this section of the catalog.

## Major Requirements

Students seeking a BA in philosophy are
required to complete at least 33 credit hours in philosophy, at least 24 credits of which are numbered 300 or above. In order for a course to count towards a student's major program, the student must receive a grade of C or better in the course. Each student must fulfill the following requirements:

PHI 251 - Logic
PHI 401 - Seminar for Philosophy Majors

## At least two of the following courses in the history of philosophy:

PHI 307 - Ancient Philosophy
PHI 308 - Classical Islamic Philosophy
PHI 311 - The Rationalists
PHI 313 - British Philosophy
PHI 317 - Political Philosophy: The Social Contract Tradition and its Critics
PHI 391 - History of Ethics
PHI 418 - Hegel, Marx, and Nietzsche
PHI 510 - Topics in Ancient Philosophy
Note:
*Other appropriate courses as approved by the Director of Undergraduate Studies

Metaphysics, Epistemology, Mind, Language, and Logic: At least one of the following:

PHI 321 - Twentieth Century Theories of Knowledge, Reality, and Meaning
PHI 351 - Logic and Language
PHI 373 - Introduction to the Philosophy of Science
PHI 375 - Philosophy of Biology: What Can Evolution Explain?
PHI 376 - Philosophy of Mind
PHI 377 - Philosophy of Psychology
PHI 378 - Minds and Machines
PHI 381 - Metaphysics
PHI 383 - Free Will
PHI 385 - Personal Identity
PHI 387 - Epistemology
PHI 551 - Mathematical Logic
PHI 552 - Modal Logic
PHI 555 - Philosophy of Mathematics
PHI 565 - Philosophy of Language
PHI 573 - Philosophy of Physical Science
PHI 575 - Philosophy of Social Science
PHI 576 - Philosophy of Mind
Note:
*Other appropriate course approved by the Director of Undergraduate Studies
Value Theory: At least one of the

## following:

PHI 317 - Political Philosophy: The Social Contract Tradition and its Critics
PHI 379 - American Slavery and the Holocaust
PHI 391 - History of Ethics
PHI 393 - Contemporary Ethics
PHI 394 - Environmental Ethics
PHI 395 - Philosophy of Art
PHI 396 - Stem Cells and Society
PHI 397 - Philosophy of Law
PHI 398 - Medical Ethics
PHI 417 - Contemporary Political Philosophy
PHI 493 - Contemporary Ethical Issues
PHI 593 - Ethics and the Health professions
PHI 594 - Bioethics

## Note:

*Other appropriate course approved by the Director of Undergraduate Studies

## Physics, BA

## Director of <br> Undergraduate Studies

201 Physics Building
315-443-3901

## Faculty

Cristian Armendariz-Picon, Marina Artuso, Stefan Ballmer, Steven Blusk, Mark Bowick, Duncan Brown, Simon Catterall, JiJi Fan, Martin B. Forstner, Kenneth Foster, Jay Hubisz, Matthew LaHaye, John Laiho, Edward D. Lipson, M. Lisa Manning, M. Cristina Marchetti, Alan Middleton, Liviu Movileanu, Britton Plourde, Carl Rosenzweig, Peter Saulson, Eric A. Schiff, Jennifer Schwarz, Tomasz Skwarnicki, Mitchell Soderberg, Paul Souder, Sheldon Stone, Gianfranco Vidali, Scott Watson

Physicists idealize the behavior of matter and energy in terms of mathematical representations called the "fundamental laws of nature" and seek to explain the properties of nuclei, atoms, molecules, and systems of these particles (gases, liquids, crystals, etc.). Undergraduate courses provide a background in classical physics, quantum mechanics, and laboratory techniques.

The department offers coursework leading to either a B.A. or a B.S. degree. The major leading to the B.S. degree is modeled on the recommendations of the American Physical Society for students intending to pursue graduate work in physics. Students submit a petition to receive a B.S. in physics and should consult the director of undergraduate studies concerning required courses. For information about
certification to teach physics at the secondary school level, see "Education/Arts and Sciences (dual program)" in this section of the catalog.
Other information about physics can be found on the Internet at physics.syr.edu.

## B.A. Degree Requirements

The B.A. degree in physics is an important accomplishment for students considering careers in such widely varying areas as law, journalism, corporate management, and teaching. In all of these fields a liberal education incorporating serious study of a scientific discipline is an asset.
Development of analytical and computational skills through the study of advanced undergraduate physics.
Development of written and verbal communication skills, including the specialized skills required for the communication of technical information.

Development of a broad understanding of the role of science and technology in modern life. The bachelor of arts degree requires completion of at least 30 credits of physics and astronomy courses.

## Eight credits of lower-division courses are required:

PHY 211 - General Physics I or
PHY 215 - General Physics I (Honors and Majors)
PHY 221 - General Physics Laboratory I
PHY 212 - General Physics II or
PHY 216 - General Physics II (Honors \& Majors)
PHY 222 - General Physics Laboratory II
Eighteen credits of upper-division
physics and astronomy courses
are required, including:
PHY 344 - Experimental Physics I
PHY 361 - Introduction to Modern Physics
Physics, BS

## Director of

 Undergraduate Studies201 Physics Building
315-443-3901

## Faculty

Cristian Armendariz-Picon, Marina Artuso, Stefan Ballmer, Steven Blusk, Mark Bowick, Duncan Brown, Simon Catterall, JiJi Fan, Martin B. Forstner, Kenneth Foster, Jay Hubisz, Matthew LaHaye,

John Laiho, Edward D. Lipson, M. Lisa Manning, M. Cristina Marchetti, Alan Middleton, Liviu Movileanu, Britton Plourde, Carl Rosenzweig, Peter Saulson, Eric A. Schiff, Jennifer Schwarz, Tomasz Skwarnicki, Mitchell Soderberg, Paul Souder, Sheldon Stone, Gianfranco Vidali, Scott Watson

Physicists idealize the behavior of matter and energy in terms of mathematical representations called the "fundamental laws of nature" and seek to explain the properties of nuclei, atoms, molecules, and systems of these particles (gases, liquids, crystals, etc.). Undergraduate courses provide a background in classical physics, quantum mechanics, and laboratory techniques.

The department offers coursework leading to either a B.A. or a B.S. degree. The major leading to the B.S. degree is modeled on the recommendations of the American Physical Society for students intending to pursue graduate work in physics. Students submit a petition to receive a B.S. in physics and should consult the director of undergraduate studies concerning required courses. For information about certification to teach physics at the secondary school level, see "Education/Arts and Sciences (dual program)" in this section of the catalog.

Other information about physics can be found on the Internet at physics.syr.edu.

## B.S. Degree Requirements

The B.S. degree is intended to provide a deep understanding of physical principles and the ability to solve challenging technical problems. Many students who complete the B.S. pursue graduate work in physics or other scientific or engineering disciplines or medical school, while others directly go on to use these skills in a variety of technically-oriented careers.
The B.S. degree in physics requires at least 39 credits of physics course work, including at least 30 credits of upper-division courses (numbered 300 or above). The required course work for the B.S. includes:

## 31 credits in PHY courses:

PHY 211 - General Physics I or
PHY 215 - General Physics I (Honors and Majors)
PHY 212 - General Physics II or
PHY 216 - General Physics II (Honors \& Majors)
and
PHY 221 - General Physics Laboratory I and
PHY 222 - General Physics Laboratory II
PHY 344 - Experimental Physics I
PHY 360 - Vibrations, Waves and Optics
PHY 361 - Introduction to Modern Physics
PHY 424 - Electromagnetics I

PHY 523 - Advanced Mechanics
PHY 531 - Thermodynamics and Statistical Mechanics

PHY 567 - Introduction to Quantum Mechanics I

## 15-18 credits in Mathematics:

```
MAT 295-Calculus I and
MAT 296 - Calculus II
MAT 397- Calculus III
MAT 485 - Differential Equations and Matrix
    Algebra for Engineers
or
MAT 331 - First Course in Linear Algebra and
MAT 414 - Introduction to Ordinary Differential Equations
```


## 3 credits in Computing:

PHY 307 - Science and Computers I or
an approved course from ECS, such as ECS 102 or ECS 104, chosen in consultation with your advisor (If PHY 307 is taken, it counts toward 39 total PHY credits.)

## 5-8 elective PHY credits:

Additional elective courses chosen in consultation with your advisor. (PHY 307 may be used toward elective credits.)
While not required for the B.S, students interested in pursuing graduate study in physics are strongly encouraged to pursue additional course work in consultation with their academic advisor.

Students are also encouraged to take an introductory lecture and lab course from another scientific discipline, including chemistry, biology, or earth science.
For sample syllabi, see the departmental web page: physics.syr.edu/undergraduate.

## Option in Biological and Medical Physics

Sophisticated biophysical technologies are increasingly employed in medicine and other health professions; examples include ultrasound, computed tomography, magnetic resonance imaging, fiberoptic endoscopy, and laser surgery. Moreover, the rapidly advancing knowledge in the biomedical fields depends on biophysical concepts and methods, notably electrophysiology, pharmacological kinetics, and biomolecular structure determination. Accordingly, there is need for health care professionals and life scientists with ample training in the physical as well as biological sciences.

The following interdisciplinary option under the
B.S. in physics is designed for students who are adept at the mathematical problem solving and conceptual aspects of physics, and who are interested in careers in biology, biological physics, medical physics, or medicine. Students with demonstrated proficiency in both physical and biological sciences will have special advantages not only for admission to and performance in graduate and professional schools, but also for their subsequent careers. More specifically, such training would be particularly relevant for the following fields of medicine: cardiology, neurology, ophthalmology, and radiology.
The following course sequence and variations meet the general prerequisites for medical school admission established by the Association of American Medical Colleges and also apply for careers in most of the other health professions. Courses followed by an asterisk are specifically required for admission to most medical schools.

## First Year

PHY 215 - General Physics I (Honors and Majors) or

PHY 211 - General Physics I *
PHY 221 - General Physics Laboratory I *
PHY 216 - General Physics II (Honors \& Majors) or
PHY 212 - General Physics II *
PHY 222 - General Physics Laboratory II *
CHE 106 - General Chemistry Lecture I *
CHE 107 - General Chemistry Laboratory I *
CHE 116 - General Chemistry Lecture II *
CHE 117 - General Chemistry Laboratory II *
MAT 295 - Calculus I *
MAT 296 - Calculus II *

## Second Year

PHY 250 - Physics Journal Workshop
BIO 121 - General Biology I *
BIO 123 - General Biology II * and
BIO 124-General Biology II Laboratory *
CHE 275-Organic Chemistry I *
CHE 276 - Organic Chemistry I Laboratory *
CHE 325 - Organic Chemistry II *
CHE 326 - Organic Chemistry II Laboratory *
MAT 397 - Calculus III
Third Year
PHY 315 - Biological and Medical Physics
PHY 344 - Experimental Physics I
PHY 360 - Vibrations, Waves and Optics

PHY 361 - Introduction to Modern Physics
BIO 326 - Genetics or
BIO 327 - Cell Biology
CHE 474 - Structural and Physical Biochemistry

## Fourth Year

PHY 424 - Electromagnetics I
PHY 531 - Thermodynamics and Statistical Mechanics

MAT 485 - Differential Equations and Matrix Algebra for Engineers

## Electives

Seven or more credits should be selected from the following courses:
PHY 425 - Electromagnetics II
PHY 444 - Soft Matter
PHY 462 - Experimental Physics II
PHY 523 - Advanced Mechanics
PHY 567 - Introduction to Quantum Mechanics I
PHY 576 - Introduction to Solid-State Physics
BCM 475 - Biochemistry I
BCM 476 - Biochemistry II
BCM 477 - Proteins and Nucleic Acids Lab
BIO 475 - Biochemistry Laboratory
ELE 524 - Introduction to Applied Optics (with laboratory)

MAT 517 - Partial Differential Equations and Fourier Series

## Note:

Honors Program students should register for research in a biophysics laboratory, under the auspices of BIO 460[3], CHE 450[3], or PHY 490[3]. For students intending to apply to M.D./ Ph.D. programs, such experience in a biophysics research laboratory is strongly recommended.

## Policy Studies, BA

## Contact:

William D. Coplin
Director, Public Affairs Program
102 Maxwell Hall
315-443-2348
Email: wdcoplin@syr.edu

## Faculty

Douglas V. Armstrong, John S. Burdick, A.H. Peter Castro, William D. Coplin, Donald H. Dutkowsky, Jerry Evensky, Paul Hagenloh, Kathleen A.

Hinchman, Elisabeth D. Lasch-Quinn, Mary E. Lovely, Amy C. Lutz, Allan C. Mazur, Don Mitchell, Mark Monmonier, Robert Moreno, Anne E. Mosher, Nancy R. Mudrick, Tina Nabatchi, Arthur Paris, William S. Pooler, Sarah B. Pralle, Jane Read, Grant D. Reeher, Robert A. Rubinstein, Mark Rupert, Maureen L. Thompson, David Van Slyke, Michael Wasylenko, Joseph Richard Welsh, John C. Western, Jamie L. Winders, John M. Yinger
The major introduces students to historical, social, economic, and political factors shaping contemporary public policy issues. Students develop an expertise in a public policy area of their choice that provides a broad range of scholarly perspectives.
Students also acquire practical skills by studying policy issues through coursework in the Public Affairs Program, other departments in the Maxwell School and in the College of Arts and Sciences, Sport and Human Dynamics, Management, and Newhouse. Students develop skills in social science research, computer applications, data collection and analysis, written and oral communications, interpersonal relations, planning, management, and problem solving. These skills are needed to obtain desirable entry-level positions in business, government, and the non-profit sector. They also serve as excellent preparation for admission to leading law schools and public, business, and health administration, as well as other graduate programs. The skills are also essential for participating effectively as a citizen in today's world.
Several of the required major courses involve internships and policy-related field work. An integral part of the policy studies major is the completion of a research project for a government agency or community organization. This study is frequently used by graduates to display their talents to prospective employers and graduate schools. A practicum is also required in which students complete an internship or work as a research consultant on an applied project. Students complete no less than 6 and as many as 15 credits in community-based coursework.
Students take 60 percent of their coursework in a core that develops basic skills and covers essential concepts. The other 40 percent of coursework is taken in one of four topical specializations: (1) Society and the Legal System; (2) Environment; (3) Business and Government; and (4) Health, Education, and Human Services. A major in Policy Studies leads to a B.A. degree in the College of Arts and Sciences.
Before admission to the major, students must have a "B" or better in PAF 101 - An Introduction to the Analysis of Public Policy and have completed or passing by mid-semester MAX 201 - Quantitative Methods for the Social Sciences or a suitable alternative approved by Professor Coplin. Students must complete at least 35 hours
of public service by taking PAF 110 or a suitable alternative approved by Professor Coplin. An interview with Professor William D. Coplin, Director of the Public Affairs Program, is necessary before formally admitted as majors.

## Major Requirements

Students are required to take an 18 -credit core and a 12 -credit topical specialization. At least six courses must be numbered 300 or above.

## Core

The core introduces research skills necessary to analyze public policy issues. The following are required:
PAF 101 - An Introduction to the Analysis of Public Policy
MAX 201 - Quantitative Methods for the Social Sciences

PAF 315 - Methods of Public Policy Analysis and Presentation

PAF 410 - Practicum in Public Policy
ECN 203 - Economic Ideas and Issues
MAX 123 - Critical Issues for the United States .

## Topical Specializations

Students complete 12 credits in one of the four Topical Specializations: (1) Environment; (2) Government and Business; (3) Health, Education, and Human Services; (4) Society and the Legal System. No more than 9 credits may be taken from any department other than Public Affairs. A course selection guide that lists course options in each area is available in the Public Affairs Program office every semester prior to registration. The courses chosen are to be approved by the policy studies advisor.

## Political Philosophy, BA

## Contact:

## Kenneth Baynes

Philosophy
208 Tolley
315-443-8976
or
Elizabeth Cohen
Political Science
100 Eggers Hall
315-443-5870

## Faculty

See faculty listings under the programs in Philosophy and in Political Science.

Political philosophy is reflective thought on group
activity. It differs from political science in that it is a conceptual inquiry, while political science is a more empirical and practical application of that inquiry. The program enables students to pursue studies using the resources of both the philosophy department and the political science department. Students take coursework in ethics, political theory, history of political thought, law, and human nature. Some other topics of study include governmental structures and their ideal implementation, political behavior, civil liberties, the relationship between individuals and governments, and philosophy of law.

## Major Requirements

## The program requires a total of 30 credits.

Of these, 12 credits are selected from the following courses:
PHI 107 - Theories of Knowledge and Reality
PHI 175 - Introduction to Social and Political Philosophy

PHI 192 - Introduction to Moral Theory
PHI 317 - Political Philosophy: The Social Contract Tradition and its Critics

PHI 417 - Contemporary Political Philosophy
PSC 125 - Political Theory
PHI 107 may also apply toward satisfaction of the humanities divisional requirements in the Liberal Arts Core.
No more than two 100-level courses can count towards these 12 credits.

## In addition, students choose two of the following four areas

In addition, students choose two of the following four areas, and take nine credits in each: (1) history of political thought; (2) law; (3) ethics and politics; and (4) human nature and political theory. Each course selection needs the approval of a political philosophy advisor. The courses listed below satisfy these area requirements. However, additional courses in philosophy or political science, such as selected topics courses, may be approved, as may certain courses in other departments such as history or sociology, as well as appropriate courses given outside of the arts and sciences. Each political philosophy student consults with the advisor about course selections each semester. The illustrative examples are:

## (1) History of political thought:

PSC 326 - Foundations of American Political Thought

PSC 327 - Modern American Political Thought

PSC 372 - Marxist Theory
PHI 418 - Hegel, Marx, and Nietzsche
(2) Law:

ECN 575 - Law and Market Economy
PSC 324 - Constitutional Law I
PSC 325 - Constitutional Law II
PSC 352 - International Law
PSC 374 - Law and Society
PSC 375 - Philosophy of Law

## (3) Ethics and politics:

PHI 393 - Contemporary Ethics
PHI 493 - Contemporary Ethical Issues
PSC 356 - Political Conflict
ANT 483 - Social Movement Theory
PHI 343 - Philosophy of Education
PHI 379 - American Slavery and the Holocaust
(4) Human nature and political theory:

PHI 197 - Human Nature
PHI 391 - History of Ethics
PHI 297 - Philosophy of Feminism
PHI 377 - Philosophy of Psychology
SOC 335 - Political Sociology
PSC 319 - Gender and Politics
SOS 575 - Philosophy of Social Science
WGS 301 - Feminist Theories
WGS 343 - Latina Feminist Theories

## Political Science, BA

100 Eggers Hall
315-443-2416
Chair: Mehrzad Boroujerdi

## Faculty

Lamis Abdelaaty, Kristi J. Andersen, Michael Barkun, Hossein Bashiriyeh, Kenneth Baynes, James P. Bennett, G. Matthew Bonham, Mehrzad Boroujerdi, Keith J. Bybee, Horace Campbell, Matthew R. Cleary, Elizabeth F. Cohen, Francine D'Amico, Renée de Nevers, David Kwame Dixon, Gavan Duffy, Colin Elman, Miriam Fendius Elman, Margarita Estévez-Abe, Christopher G. Faricy, Shana Gadarian, Dimitar D. Gueorguiev, Petra Hejnova, Margaret Hermann, Seth Jolly, Thomas M. Keck, Ralph Ketcham, Audie Klotz, W. Henry Lambright, Robert D. McClure, Daniel McDowell, Glyn Morgan, Spencer Piston, Sarah B. Pralle, Grant D. Reeher, Mark Rupert, Anoop

Sadanandan, S.N. Sangmpam, Yüksel Sezgin, Jeffrey M. Stonecash, Jennifer Stromer-Galley, Brian D. Taylor, Laurence Thomas, Margaret Susan Thompson, Danielle M. Thomsen, Stuart J. Thorson

The study of political science helps us answer critical questions about how power in exercised in society and how benefits and burdens are distributed among the world's countries and citizens within them. Political Science can serve as the core of a liberal arts education, helping you to master critical thinking, research, and writing skills while exposing you to some of the most important traditions of thought about politics and public life. It can prepare you for a lifetime of active and informed citizenship. And it can help you prepare a path to law school, graduate school, and careers in law, public service, electoral politics, public policy, journalism and communications, non-profit advocacy, international relations, and academia, among other fields.

## Note:

Students are required to fulfill the requirements for the B.A. or minor in political science as stipulated in the course catalog for the academic year in which they declare their political science major or minor. Graduation with a B.A. or a minor in political science requires a 2.0 average in the upper-division coursework applied toward the major or minor.

## Major Requirements

To declare a political science major, students must complete one PSC course with a grade no lower than a C-. The B.A. in political science requires 30 credits, including PSC 121, one additional course at the 100 level, and PSC 202. Of the remaining 21 credits, 18 are taken in courses numbered 300 or above. An additional 3 credits may be taken at the 100 level as part of the remaining 21 credits, but no more than a total of 9 credits may be taken at the 100 level. PSC courses with a grade of $D$ may not be applied toward the major requirements. The upper-division courses regularly offered by the department are included in the list below. PSC majors must take at least one course from the approved list of courses with international content (approved courses are designated with an asterisk [*], see list below). Political science majors must take at least 9 credits of coursework included in one cluster of related upper-division courses. (Clusters are listed below.) Experience credit courses may not be used to satisfy major requirements. Political science majors seeking a degree with honors must satisfy the requirements of the Honors Program in addition to the requirements for the major in political science.

## Political Science Courses and Clusters

The courses regularly offered by the department for application toward a major are listed below. Special topics courses (PSC 300, PSC 411) and courses which may be taken multiple times (PSC 350) may be included in a cluster with the approval of the undergraduate advisor. Courses taken abroad may also count with the approval of the undergraduate advisor. Finally, students may petition to construct their own cluster; this petition will be considered by the department's Undergraduate Studies Committee.

PSC 121 - American National Government and Politics

PSC 122 - American State and Local Government and Politics

PSC 123 - Comparative Government and Politics *

PSC 124 - International Relations *
PSC 125 - Political Theory
PSC 129 - American National Government and Politics (Honors)
PSC 139 - International Relations (Honors) *
PSC 202 - Introduction to Political Analysis
PSC 317 - Local Internship
PSC 495 - Distinction Thesis Seminar in Political Science I

PSC 496 - Distinction Thesis Seminar in Political Science II

## Law and Politics

PSC 304 - The Judicial Process
PSC 316 - The Supreme Court in American Politics
PSC 324 - Constitutional Law I
PSC 325 - Constitutional Law II
PSC 352 - International Law *
PSC 374 - Law and Society
PSC 375 - Philosophy of Law
PSC 384 - Sexuality and the Law

## Public Policy

PSC 302 - Environmental Politics and Policy
PSC 303 - The Development of the American State
PSC 305 - U.S. Congressional Politics
PSC 308 - The Politics of U.S. Public Policy
PSC 309 - Interest Group Politics
PSC 312 - Urban Government and Politics
PSC 315 - Politics and Media
PSC 318 - Technology, Politics, and Environment

PSC 323 - Politics of the Executive Branch
PSC 357 - U.S. Foreign Policy *
PSC 359 - Foreign Policymaking *
PSC 361 - Politics in the Cyber-Age *
PSC 369 - Global Migration *
PSC 427 - Policy Seminar/Contemporary Europe
*
PSC 462 - Globalization Development and Environment *

## Political Economy

PSC 330 - Political Economy of Gender in Industrialized Countries

PSC 333 - Politics of Latin America *
PSC 334 - Mexico and the United States *
PSC 335 - Politics of East Asia *
PSC 351 - Political Economy of Development *
PSC 355 - International Political Economy *
PSC 365 - International Political Economy of the Third World *

PSC 367 - Oil, Water and War *
PSC 369 - Global Migration *
PSC 388 - Politics of Globalization *
PSC 396 - European Integration *
PSC 425 - Hong Kong in the World Political Economy *

PSC 444 - Culture, Business and Political Economics in East Asia *

## American Politics

PSC 302 - Environmental Politics and Policy
PSC 303 - The Development of the American State
PSC 304 - The Judicial Process
PSC 305 - U.S. Congressional Politics
PSC 306 - African American Politics
PSC 308 - The Politics of U.S. Public Policy
PSC 309 - Interest Group Politics
PSC 311 - American Political Parties
PSC 313 - Campaign Analysis
PSC 314 - Public Opinion and Electoral Behavior
PSC 315 - Politics and Media
PSC 316 - The Supreme Court in American Politics
PSC 321 - Populism and Conspiracy Culture
PSC 323 - Politics of the Executive Branch
PSC 324 - Constitutional Law I
PSC 325 - Constitutional Law II
PSC 326 - Foundations of American Political Thought

PSC 327 - Modern American Political Thought
PSC 328 - American Social Movements
PSC 329 - The Modern American Presidency
PSC 357 - U.S. Foreign Policy *
PSC 379 - American Slavery and the Holocaust
PSC 398 - How the United States Became a Great Power

## Comparative Politics

PSC 330 - Political Economy of Gender in Industrialized Countries

PSC 331 - Canadian Politics *
PSC 333 - Politics of Latin America *
PSC 334 - Mexico and the United States *
PSC 335 - Politics of East Asia *
PSC 338 - Comparative Political Parties *
PSC 339 - Transitions to Democracy *
PSC 341 - Politics of Africa *
PSC 342 - Religion and Politics in the IsraeliPalestinian Conflict *

PSC 343 - Politics of Europe *
PSC 344 - Politics of the Middle East *
PSC 345 - Islam and Politics in Asia *
PSC 346 - Comparative Third World Politics *
PSC 347 - Politics of Russia *
PSC 348 - Politics and the Military *
PSC 349 - Politics of Iran *
PSC 351 - Political Economy of Development *
PSC 362 - Religion, Identity and Power *
PSC 364 - African International Relations *
PSC 365 - International Political Economy of the Third World *

PSC 366 - Representations of the Middle East *
PSC 368 - Islam and the West *
PSC 387 - Ethnic Conflict *
PSC 388 - Politics of Globalization *
PSC 389 - Politics of India *
PSC 391 - Revolutions in the Middle East *
PSC 392 - Islamism and Islamist Movements Today *
PSC 393 - Middle Eastern Political Systems *
PSC 394 - History of Islamic Political Thought *
PSC 395 - Democratization in the Muslim World *
PSC 396 - European Integration *
PSC 405 - Politics of the European Union *
PSC 409 - The European Union *
PSC 414 - European Identity Seminar *

PSC 421 - Contemporary Central and Eastern Europe *

PSC 422 - Understanding 20th Century Spain *
PSC 424 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone *
PSC 425 - Hong Kong in the World Political Economy *

PSC 427 - Policy Seminar/Contemporary Europe *

PSC 428 - Contemporary Issues in Chile and Latin America *

PSC 429 - European Human Rights *
PSC 431 - China in Transition *
PSC 432 - The Pale and Beyond *
PSC 442 - Democratization in East Asia *
PSC 444 - Culture, Business and Political Economics in East Asia *

PSC 445 - Contemporary British Politics and the Modern World *

PSC 452 - Italy: Past, Present and Future Challenges *
PSC 453 - Twentieth Century Europe *
PSC 456 - Religion and Conflicts in Contemporary Europe *

PSC 458 - Contemporary Issues in Turkey *
Democracy and Political Mobilization
PSC 302 - Environmental Politics and Policy
PSC 307 - The Politics of Citizenship
PSC 308 - The Politics of U.S. Public Policy
PSC 309 - Interest Group Politics
PSC 311 - American Political Parties
PSC 314 - Public Opinion and Electoral Behavior
PSC 319 - Gender and Politics
PSC 321 - Populism and Conspiracy Culture
PSC 326 - Foundations of American Political Thought

PSC 327 - Modern American Political Thought
PSC 328 - American Social Movements
PSC 337 - Political Psychology *
PSC 338 - Comparative Political Parties *
PSC 339 - Transitions to Democracy *
PSC 342 - Religion and Politics in the IsraeliPalestinian Conflict *

PSC 356 - Political Conflict *
PSC 362 - Religion, Identity and Power *
PSC 371 - Democratic Theory and Politics
PSC 378 - Power and Identity

PSC 386 - Gender, Militarism, and War *
PSC 391 - Revolutions in the Middle East *
PSC 395 - Democratization in the Muslim World *
PSC 413 - Identity and Difference
PSC 414 - European Identity Seminar *
PSC 442 - Democratization in East Asia *
Global Governance and Foreign Policy
PSC 322 - International Security *
PSC 334 - Mexico and the United States *
PSC 350 - Problems in International Relations *
PSC 352 - International Law *
PSC 353 - International Organization *
PSC 354 - Human Rights and Global Affairs *
PSC 355 - International Political Economy *
PSC 357 - U.S. Foreign Policy *
PSC 358 - Latin American International Relations *

PSC 359 - Foreign Policymaking *
PSC 363 - Ethics and International Relations *
PSC 388 - Politics of Globalization *
PSC 396 - European Integration *
PSC 397 - Realism and Power Politics in International Relations *

PSC 398 - How the United States Became a Great Power *
PSC 405 - Politics of the European Union *
PSC 412 - Global Governance: The United Nations System *
PSC 414 - European Identity Seminar *
PSC 429 - European Human Rights *
PSC 441 - Europe and International Security Issues *

PSC 458 - Contemporary Issues in Turkey *
PSC 462 - Globalization Development and Environment *

Political Theory
PSC 307 - The Politics of Citizenship
PSC 326 - Foundations of American Political Thought

PSC 327 - Modern American Political Thought
PSC 363 - Ethics and International Relations *
PSC 366 - Representations of the Middle East *
PSC 371 - Democratic Theory and Politics
PSC 372 - Marxist Theory
PSC 373 - Political Philosophy: The Social Contract Tradition and its Critics

PSC 378 - Power and Identity
PSC 382 - Contemporary Political Philosophy
PSC 385 - Rationality and Politics
PSC 394 - History of Islamic Political Thought *
PSC 399 - God in Political Theory
PSC 406 - Citizenship from Modernity to Globalization *

## International War and Peace

PSC 322 - International Security *
PSC 342 - Religion and Politics in the IsraeliPalestinian Conflict *

PSC 348 - Politics and the Military *
PSC 352 - International Law *
PSC 354 - Human Rights and Global Affairs *
PSC 356 - Political Conflict *
PSC 359 - Foreign Policymaking *
PSC 363 - Ethics and International Relations *
PSC 367 - Oil, Water and War *
PSC 377 - Religion and Politics
PSC 379 - American Slavery and the Holocaust *
PSC 386 - Gender, Militarism, and War *
PSC 387 - Ethnic Conflict *
PSC 391 - Revolutions in the Middle East *
PSC 392 - Islamism and Islamist Movements Today *
PSC 397 - Realism and Power Politics in International Relations *

PSC 412 - Global Governance: The United Nations System *

PSC 429 - European Human Rights *
PSC 441 - Europe and International Security Issues *

PSC 456 - Religion and Conflicts in Contemporary Europe *

## Distinction in Political Science

Minimum Department GPA 3.5
Minimum Cumulative GPA 3.5

## Additional Information

Award of Distinction in Political Science requires successful completion of 6 credits of distinction thesis preparatory coursework (PSC 495 and PSC 496) and successful defense of written thesis.

## Psychology, BA

Peter Vanable, Ph.D., Chair
430 Huntington Hall
315-443-2354

## Faculty:

Kevin Antshel, Benita A. Blachman, D. Bruce Carter, Catherine A. Cornwell, Amy H. Criss, Jeanne Denti, Joseph Ditre, Tanya L. Eckert, Craig K. Ewart, Les Gellis, Richard M. Gramzow, Randall S. Jorgenson, Michael Kalish, Lawrence J. Lewandowski, Stephen Maisto, Brian K. Martens, Christopher B. Miller, Leonard Newman, Tibor Palfai, Aesoon Park, Natalie Russo, Lael Schooler, Bradley Seymour, Laura VanderDrift, Peter A. Vanable and Corey White.

Psychology is the scientific study of behavior. Professional psychologists may be researchers investigating behavior and/or practitioners, applying their knowledge and skills to individual and social problems.

The Psychology Department offers several options for students. These include a Bachelor of Arts major, a Bachelor of Science major, and a minor.

Students planning to pursue a career in which a background in psychology is useful, such as business, communications, or social services, will find the B.A. degree to be an appropriate track. These students are encouraged to pursue experiences through part-time work or internships in their area of interest. Students interested in pursuing professional careers in psychology, social work, or other professional fields such as law will need to attend graduate school and obtain an advanced degree. These students are encouraged to consult with their academic advisor for advice on whether the B.A. or B.S. degree is most appropriate to meet their long-term goals. The B.S. degree is recommended for students planning professional careers in such fields as medicine, dentistry, and physical therapy. All students should consult regularly with their faculty advisor in planning a program of study that is consistent with their future academic and career goals. All students are encouraged to utilize the career resources available in the Department of Psychology, the College of Arts and Sciences, and the University to learn about opportunities and prepare strategies to meet their goals.

## Petitions

Students interested in taking a psychology class at another institution and transferring it to Syracuse University to count toward either the major or minor must complete a petition form (downloadable from the department web site) and bring it and a syllabus for the course to the Advising Office (415 Huntington) for approval
prior to enrolling in the course. Petitions may take up to two weeks for review. Winter intersession classes are generally not accepted as transfer credit. Students should plan their program of study in consultation with their academic advisor in order to insure timely completion of degree requirements No more than three hours of experience credit (PSY 270 or PSY 470) may be applied toward the minimum number of hours required for the major.

## Bachelor of Arts in Psychology Degree

The B.A. requires a minimum of 30 credits in psychology (PSY) courses, 18 of which must be numbered 300 or above. Students must earn a grade point average of at least a 2.0 in all upper-division Psychology courses taken at Syracuse University and counted towards the completion of the major (see MySlice for the GPA calculator). Students must begin by taking PSY 205 Foundations of Human Behavior (or the Honors equivalent, PSY 209). PSY 205 (or PSY 209) is a prerequisite for all other psychology courses. All majors also must complete PSY 313 Introduction to Research Methodology and are encouraged to complete this course in addition to the required statistics sequence as soon as possible. Majors must satisfy a two semester statistics sequence from the list below which also satisfies the quantitative skills requirement of the Liberal Arts Core:

## Math Sequence Options

## Preferred Option for Math Sequence:

MAT 221 - Elementary Probability and Statistics I PSY 252 - Statistical Methods II

## Alternative Math Sequence \#1

MAT 121 - Probability and Statistics for the Liberal Arts 1

PSY 252 - Statistical Methods II or
MAT 122 - Probability and Statistics for the Liberal Arts II

## Alternative Math Sequence \#2

MAT 221 - Elementary Probability and Statistics I
MAT 222 - Elementary Probability and Statistics II

## Alternative Math Sequence \#3

MAT 285 - Life Sciences Calculus I
MAT 286 - Life Sciences Calculus II
PSY 252 - Statistical Methods II

## Alternative Math Sequence \#4

MAT 295 - Calculus I
MAT 296 - Calculus II
PSY 252 - Statistical Methods II

## Psychology Area Requirements and Electives

One 3-credit course must be completed in each of the four areas of psychology listed below. A single course may be used to satisfy requirements in only one area. Students may petition to have psychology (i.e., PSY) courses not listed in the four areas (e.g., PSY 400) count as completing a group requirement. Please note some courses are offered infrequently (COI) which are included in the lists below:

## Cognitive/Neuroscience

PSY 223 - Introduction to Cognitive Neuroscience
PSY 315 - Drugs and Human Behavior
PSY 321 - Introduction to Sensation and Perception

PSY 322 - Cognitive Psychology
PSY 323 - Brain and Behavior
PSY 324 - Developmental Biopsychology
PSY 373 - Human Memory
PSY 426 - Cognitive Neurochemistry
PSY 437 - Cognition and Aging
PSY 496 - Neuroscience and Society (COI)

## Developmental/Educational

PSY 335 - Psychology of Childhood
PSY 336 - Psychology of the Adolescent
PSY 337 - Psychology of Adult Life: Maturity and Old Age

PSY 353 - Psychological Measurement
PSY 365 - Educational Psychology
PSY 432 - Behavioral Analysis in Children
PSY 445 - Behavior Disorders in Children
PSY 447 - Psychology of Childhood Reading Disorders

## Social/Personality

PSY 274 - Social Psychology
PSY 382 - Health Psychology
PSY 392 - Stress and Health
PSY 393 - Personality
PSY 410 - Close Relationships
PSY 474 - Forensic Psychology

Clinical/Health
PSY 315 - Drugs and Human Behavior
PSY 329 - Biopsychological Perspectives on Women's Health

PSY 353 - Psychological Measurement
PSY 382 - Health Psychology
PSY 384 - Health and Behavior
PSY 392 - Stress and Health
PSY 393 - Personality
PSY 395 - Abnormal Psychology
PSY 415 - Introduction to Clinical Psychology
PSY 425 - Internships in Clinical Psychology
PSY 431 - Alcohol Use and Abuse
PSY 432 - Behavioral Analysis in Children
PSY 445 - Behavior Disorders in Children
PSY 474 - Forensic Psychology

## Psychology Electives

The B.A. student selects additional Psychology (PSY) electives from the areas above to achieve the minimum of 30 credits. MAT courses taken to complete the statistics requirement do not count toward the 30 credit minimum.

## Psychology, BS

Peter Vanable, Ph.D., Chair
430 Huntington Hall
315-443-2354

## Faculty:

Kevin Antshel, Benita A. Blachman, D. Bruce Carter, Catherine A. Cornwell, Amy H. Criss, Jeanne Denti, Joseph Ditre, Tanya L. Eckert, Craig K. Ewart, Les Gellis, Richard M. Gramzow, Randall S. Jorgenson, Michael Kalish, Lawrence J. Lewandowski, Stephen Maisto, Brian K. Martens, Christopher B. Miller, Leonard Newman, Tibor Palfai, Aesoon Park, Natalie Russo, Lael Schooler, Bradley Seymour, Laura VanderDrift, Peter A. Vanable and Corey White
Psychology is the scientific study of behavior. Professional psychologists may be researchers investigating behavior and/or practitioners, applying their knowledge and skills to individual and social problems.

The Psychology Department offers several options for students. These include a Bachelor of Arts major, a Bachelor of Science major, and a minor. Students planning to pursue a career in which a background in psychology is useful, such as business, communications, or social services, will find the B.A. degree to be an appropriate track. These students are encouraged to pursue
experiences through part-time work or internships in their area of interest. Students interested in pursuing professional careers in psychology, social work, or other professional fields such as law will need to attend graduate school and obtain an advanced degree. These students are encouraged to consult with their academic advisor for advice on whether the B.A. or B.S. degree is most appropriate to meet their long-term goals. The B.S. degree is recommended for students planning professional careers in such fields as medicine, dentistry, and physical therapy. All students should consult regularly with their faculty advisor in planning a program of study that is consistent with their future academic and career goals. All students are encouraged to utilize the career resources available in the Department of Psychology, the College of Arts and Sciences, and the University to learn about opportunities and prepare strategies to meet their goals.

## Petitions

Students interested in taking a psychology class at another institution and transferring it to Syracuse University to count toward either the major or minor must complete a petition form (downloadable from the department web site) and bring it and a syllabus for the course to the Advising Office (415 Huntington) for approval prior to enrolling in the course. Petitions may take up to two weeks for review. Winter intersession classes are generally not accepted as transfer credit. Students should plan their program of study in consultation with their academic advisor in order to insure timely completion of degree requirements No more than three hours of experience credit (PSY 270 or PSY 470) may be applied toward the minimum number of hours required for the major.

Grades: A passing grade in all required courses (including courses petitioned for transfer credit) is necessary; the option of taking these courses pass/fail, or auditing is not permitted.

## Bachelor of Science in Psychology Degree

B.S. students must earn a grade point average of at least a 2.0 in all upper-division Psychology courses taken at Syracuse University and counted towards the completion of the major (see MySlice for the GPA calculator). Students must begin by taking PSY 205 Foundations of Human Behavior (or the Honors equivalent, PSY 209). PSY 205 (or PSY 209) is a prerequisite for all other psychology courses except PSY 252. All majors also must complete PSY 313 Introduction to Research Methodology and are encouraged to complete this course in addition to the required statistics sequence as soon as possible. Majors must satisfy a two-semester statistics sequence from
the list below which also satisfies the quantitative skills requirement of the Liberal Arts Core:

## Math Sequence Options

Preferred Option for Math Sequence:
MAT 221 - Elementary Probability and Statistics I
PSY 252 - Statistical Methods II

## Alternative Math Sequence \#1

MAT 121 - Probability and Statistics for the Liberal Arts I

PSY 252 - Statistical Methods II or
MAT 122 - Probability and Statistics for the Liberal Arts II

## Alternative Math Sequence \#2

MAT 221 - Elementary Probability and Statistics I MAT 222 - Elementary Probability and Statistics II

## Alternative Math Sequence \#3

MAT 285 - Life Sciences Calculus I
MAT 286 - Life Sciences Calculus II
PSY 252 - Statistical Methods II

## Alternative Math Sequence \#4

MAT 295 - Calculus I
MAT 296 - Calculus II
PSY 252 - Statistical Methods II

## Note:

Only courses with a PSY prefix count toward the 30 credit minimum for the B.A.; the MAT courses taken towards the statistics requirement do not count toward this minimum.

## Psychology Area Requirements and Electives

One 3-credit course must be completed in each of the four areas of psychology listed below. A single course may be used to satisfy requirements in only one area. Students may petition to have psychology (i.e., PSY) courses not listed in the four areas (e.g., PSY 400) count as completing a group requirement. Please note some courses are offered infrequently (COI) which are included in the lists below:

## Cognitive/Neuroscience

PSY 223 - Introduction to Cognitive Neuroscience
PSY 315 - Drugs and Human Behavior
PSY 321 - Introduction to Sensation and Perception

PSY 322 - Cognitive Psychology
PSY 323 - Brain and Behavior
PSY 324 - Developmental Biopsychology
PSY 373 - Human Memory
PSY 426 - Cognitive Neurochemistry
PSY 437 - Cognition and Aging
PSY 496 - Neuroscience and Society (COI)

## Developmental/Educational

PSY 335 - Psychology of Childhood
PSY 336 - Psychology of the Adolescent
PSY 337 - Psychology of Adult Life: Maturity and Old Age
PSY 353 - Psychological Measurement
PSY 365 - Educational Psychology
PSY 432 - Behavioral Analysis in Children
PSY 445 - Behavior Disorders in Children
PSY 447 - Psychology of Childhood Reading Disorders

## Social/Personality

PSY 274 - Social Psychology
PSY 382 - Health Psychology
PSY 392 - Stress and Health
PSY 393 - Personality
PSY 410 - Close Relationships
PSY 474 - Forensic Psychology

## Clinical/Health

PSY 315 - Drugs and Human Behavior
PSY 329 - Biopsychological Perspectives on
Women's Health
PSY 353 - Psychological Measurement
PSY 382 - Health Psychology
PSY 384 - Health and Behavior
PSY 392 - Stress and Health
PSY 393 - Personality
PSY 395 - Abnormal Psychology
PSY 415 - Introduction to Clinical Psychology
PSY 425 - Internships in Clinical Psychology
PSY 431 - Alcohol Use and Abuse
PSY 432 - Behavioral Analysis in Children
PSY 445 - Behavior Disorders in Children
PSY 474 - Forensic Psychology

## Psychology Electives

A minimum of seven credits in PSY elective
courses are also required; these courses can be selected from any of the PSY area lists or from the elective list provided below:
PSY 270 - Experience Credit
PSY 290 - Independent Study
PSY 291 - Research in Clinical/Health Psychology
PSY 292 - Research in Cognitive Neuroscience Psychology
PSY 293 - Research in Developmental
Educational Psychology
PSY 294 - Research in Social Personality Psychology

PSY 375 - Cross-Cultural Psychology
PSY 398 - History and Systems of Psychology
PSY 400 - Selected Topics
PSY 426 - Cognitive Neurochemistry
PSY 442 - Research Methods in Child Psychology
PSY 446 - Pediatric Psychology
PSY 470 - Experience Credit
PSY 471 - Experimental Social Psychology
PSY 490 - Independent Study
PSY 491 - Research in Clinical/Health Psychology
PSY 492 - Research in Cognitive Neuroscience Psychology
PSY 493 - Research in Developmental Educational Psychology
PSY 494 - Research in Social Personality Psychology

## Required Psychology LectureLab Sequence

B.S. students are required to complete one psychology lecture-laboratory sequence (5-6 credits). Courses selected to complete the sequence may not be used to satisfy area requirements previously listed. There are no substitutions for this requirement. The following course sequences qualify for this requirement:

PSY 321 - Introduction to Sensation and Perception

PSY 331 - Laboratory in Sensation and Perception
PSY 322 - Cognitive Psychology
PSY 332 - Laboratory in Cognitive Psychology
PSY 324 - Developmental Biopsychology
PSY 334 - Laboratory in Developmental Biopsychology
PSY 382 - Health Psychology
PSY 383 - Laboratory in Health Psychology
PSY 442 - Research Methods in Child Psychology

PSY 443 - Laboratory in Child Psychology
PSY 471 - Experimental Social Psychology PSY 472 - Laboratory in Social Psychology

## Mathematics and Natural Science Requirements

## Required Natural Science

 SequenceIn addition to the two-semester statistics sequence indicated previously, B.S. students must complete a one -year lecture-laboratory sequence in the natural sciences. A sequence must be in biology (BIO 121, BIO 123 and BIO 124), chemistry (CHE 106/CHE 116 and CHE 107/CHE 117; CHE 109/CHE 119 and CHE 129/ CHE 139), or physics (PHY 101 and PHY 102; PHY 211/PHY 221 and PHY 212/PHY 222; PHY 215/ PHY 221 and PHY 216/PHY 222).

## Mathematics and Natural Sciences Electives

Students must complete three elective courses ( 9 credits) in mathematics and/or in the natural sciences areas from the list below. These elective courses are intended to deepen or enhance the student's experience and scholarly interests in the sciences.

## Anthropology

ANT 131 - Introduction to Biological Anthropology
ANT 431 - Human Variation
ANT 433 - Human Osteology

## Astronomy

All AST courses.
Biology
All BIO courses.

## Chemistry

All CHE courses.

## Communication Sciences and

 DisordersCSD 212 -CSD 315 Introduction to Communication Sciences and Disorders: Anatomy and Physiology of Speech and Hearin
CSD 212 -CSD 325 Introduction to Communication Sciences and Disorders: Fundamentals of Hearing Science

CSD 345 Fundamentals of Speech Science
CSD 409 Cognitive Neuroscience of Speech and Language

## Earth Sciences

EAR 110 - Dynamic Earth
EAR 105 - Earth Science (credit will not be given for both EAR 110 \& EAR 105)

All EAR courses

## Geography

GEO 155 -GEO 215 The Natural Environment; Global Environmental Change

GEO 155-GEO 316 The Natural Environment; River Environments

GEO 155 -GEO 326 The Natural Environment; The Geography of Climate and Weather
GEO 455 Biogeography
GEO 482 Environmental Remote Sensing
GEO 583 Environmental Geographical Information Systems

## Mathematics

All MAT courses above 230.

## Physics

All PHY courses.
Science Teaching
All SCI courses.

## Science, Technology and Society

All STS courses may be accepted by petition

## Other Schools and Colleges

(*Apply as Non-Arts \& Sciences credit)

## David B. Falk College of Sport and

 Human DynamicsNSD 225 - Nutrition in Health *

## Religion and Society, BA

R. Gustav Niebuhr

313 Tolley Humanities Building
315-443-5723
rgniebuh@syr.edu.

## Faculty

Philip P. Arnold, Michael Barkun, Mehrzad Boroujerdi, Zachary J. Braiterman, John S. Burdick, Ann Grodzins Gold, M. Gail Hamner, Susan Henderson, Samantha Kahn Herrick, Tazim R. Kassam, Prema Kurien, Norman A. Kutcher, Micere Githae Mugo, R. Gustav Niebuhr, Marcia C. Robinson, Dennis Romano, Maureen Trudelle Schwarz, Laurence Thomas, Margaret Susan Thompson, Robert J. Thompson, Susan S. Wadley, Joanne P. Waghorne, Ernest E. Wallwork, James W.

## Watts

Religion and Society is an interdisciplinary program that provides the opportunity to study the pervasive role of religion in contemporary society, especially in U.S. national politics, international relations, economic development, and popular culture-and in most facets of social change broadly conceived. Course requirements aim to provide students with (1) an understanding of several major religious traditions on their own terms; (2) perspectives on the social and cultural roles played by religion in various periods and places, not the least of which is the contemporary world; and (3) comparative analysis of religion's influence on particular aspects of human cultures, such as politics, violence, and group identity. The program is open to any SU student, and may be especially useful to students interested in pursuing careers in journalism, international relations, law, government, or foreign service.

## Major Requirements

The B.A. in religion and society is designed to encourage study of the interaction of religion with other aspects of public affairs, such as politics, diplomacy, law, and business, on the basis of a broad understanding of various religious traditions. It consists of a minimum of 30 credits (at least 18 credits in courses numbered 300 or above), of which 12 credits must be earned in courses from the Traditions list, 12 from the Religion and Society list, and 6 from either.

## Traditions Courses (12-18 credits):

REL 281 - African Religions: An Introduction
REL 345 - African American Religious History
REL 244 - Indigenous Religions
REL 135 - Judaism
REL 101 - Religions of the World
REL 142 - Native American Religion
REL 156 - Christianity
REL 165 - Discovering Islam
REL 185 - Hinduism
REL 186 - Buddhism
REL 205 - Ancient Greek Religion
REL 206 - Greco-Roman Religion
REL 283 - India's Religious Worlds
REL 301 - Ancient Near Eastern Religions and Cultures

Religion and Society Courses (1218 credits):
AAS 326 - Africa Since 1800
AAS 402 - Slavery and Abolition

AAS 543 - Religious Cultures of the American South

ANT 373 - Magic and Religion
ANT 440 - Topics in African Archaeology
ANT 471 - Religion and Society in Brazil
ARC 435 - Islamic Architecture
HST 210 - The Ancient World
HST 212 - Religion in Medieval and Reformation Europe

HST 310 - The Early Middle Ages and
HST 311 - Medieval Civilization
HST 312 - Reformation of the 16th Century
HST 318 - The Middle East to 1900
HST 319 - The Middle East in the 20th Century
HST 320 - Traditional China
HST 328 - Ancient and Medieval India
HST 354 - Decline and Fall of the Roman Empire
REL 334 - Modern Judaism
REL 337 - Shoah: Responding to the Holocaust
PHI 379 - American Slavery and the Holocaust
PSC 345 - Islam and Politics in Asia
PSC 377 - Religion and Politics
REL 121 - Pilgrimage
REL 241 - Religious Diversity in America
REL 246 - Religion and Popular Culture
REL 252 - Ethical Decision Making
REL 300 - Selected Topics Religion and the News Media

REL 324 - Religions and Storytelling
REL 326 - Religion and Film
REL 347 - Religion and the Conquest of America
REL 348 - Religion and American Consumerism
REL 352 - Sociology of Religion and Morals
REL 375 - Religion and Ethics in Post-Freudian Depth Psychologies

REL 395 - Religions and the Natural Environment
REL 449 - Religious Dimensions of Whiteness
WGS 341 - Women, Abolition, and Religion in 19th Century America
WGS 384 - Goddesses, Women and Power in Hinduism

WGS 465 - Beyond the Veil: Gender Politics in Islam

Religion, BA

## Chair:

Ann Grodzins Gold
501 Hall of Languages
315-443-3861

## Director of Undergraduate Studies:

## Gareth J. Fisher <br> 505 Hall of Languages <br> 315-443-3861 <br> Faculty

Ahmed E. Abdel-Meguid, Philip P. Arnold, Zachary J. Braiterman, Virginia Burrus, Gareth J. Fisher, Ken Frieden, Ann Grodzins Gold, M. Gail Hamner, Tazim R. Kassam, Vincent W. Lloyd, R. Gustav Niebuhr, William A. Robert, Marcia C. Robinson, Joanne Punzo-Waghorne, Ernest E. Wallwork, James W. Watts

Knowledge of religion is critical in today's world. The academic study of religion at Syracuse University offers students the opportunity to explore religion in a cross-cultural and interdisciplinary context. Students who take courses in religion learn to interpret the dynamics of religious convictions, actions, and expressions.

Religious traditions and practices engage such questions as: What kind of life is most worth living? How do we understand the nature of the world? How do we relate to ourselves and to others?

Students study religious life and thought from the perspectives of arts, ethics, gender, history, literature, mythology, philosophy, political theory, psychology, scriptural studies, social sciences, and theology.
The academic study of religion is a critical undertaking and an often transforming experience introducing students to unfamiliar aspects of their own world, and to the religious realities of our global situation.
The Department of Religion has articulated three goals that shape its teaching and its expectations of what students in its courses and programs may expect to gain from this study:
to understand better the nature and diversity of religious expressions in the contemporary world and in history, and their power in peoples' personal and collective lives;
to think more deeply and critically about religious experience and its modes of expression and forms of interpretation;
to recognize and appreciate the difficulties
and possibilities in a disciplined study of religion; and to become aware of a diversity of approaches and methods within that study.

## Major Requirements

The major requires 30 credits of appropriate work. Up to 6 credits may be earned in individualized work within the Department of Religion (e.g., independent study, honors thesis) and up to 6 credits may be earned in advisor-approved courses outside the Department of Religion. At least 18 credits must be taken at the 300 -level or above.

Because of the diverse and interdisciplinary nature of the study of religion, students should select at least one primary and one secondary area of concentration in consultation with the Director of Undergraduate Studies. Students must take at least 9 credits in their primary area of concentration and at least 6 credits in their area of secondary concentration.

Students may design their own concentration or concentrations in consultation with the Director of Undergraduate Studies or choose from the concentrations listed below.

Jewish Thought and Experience concentration

REL 114 - The Bible
REL 131 - Great Jewish Writers
REL 135 - Judaism
REL 215 - The Hebrew Bible
REL 231 - Jewish Literature
REL 316 - The Torah/Pentateuch as a Scripture
REL 331 - European and American Jewish Literature

REL 333 - Yiddish Literature in Translation
REL 335 - Israeli Literature and Culture
REL 338 - American Judaism
REL 342 - Religion and Politics in the IsraeliPalestinian Conflict

REL 435 - Modern Jewish Thought

## Christian Thought and Experience concentration

REL 104 - Religion and Science
REL 114 - The Bible
REL 156 - Christianity
REL 206 - Greco-Roman Religion
REL 217 - The New Testament
REL 292 - The Human and Divine in Christian and Muslim Philosophy

REL 309 - Early Christianities
REL 310 - Medieval Christianities
REL 316 - The Torah/Pentateuch as a Scripture
REL 461 - Enlightenment: Between European West and Islam

## Islamic Thought and Experience concentration

REL 165 - Discovering Islam
REL 261 - Faith and Reason in Islamic Thought and Civilization

REL 283 - India's Religious Worlds
REL 292 - The Human and Divine in Christian and Muslim Philosophy
REL 342 - Religion and Politics in the IsraeliPalestinian Conflict

REL 362 - Islamism and Islamist Movements Today

REL 364 - Enchanting Words: Muslim Poets, Singers and Storytellers

REL 367 - God and Beauty in Islamic Art
REL 461 - Enlightenment: Between European West and Islam

REL 465 - Beyond the Veil: Gender Politics in Islam

Asian Religious Thought and Experience concentration
REL 165 - Discovering Islam
REL 185 - Hinduism
REL 186 - Buddhism
REL 244 - Indigenous Religions
REL 283 - India's Religious Worlds
REL 384 - Goddesses, Women and Power in Hinduism

REL 385 - Religion in Chinese Society
REL 487 - Global Hinduism
Localized and Indigenous Religions concentration

REL 142 - Native American Religion
REL 206 - Greco-Roman Religion
REL 244 - Indigenous Religions
REL 283 - India's Religious Worlds
REL 301 - Ancient Near Eastern Religions and Cultures

REL 385 - Religion in Chinese Society

## Religion in the American Experience concentration

REL 223 - Faith, Doubt, and Fanaticism
REL 242 - Religious Issues in American Life
REL 331 - European and American Jewish Literature

REL 338 - American Judaism
REL 341 - Women, Abolition, and Religion in 19th Century America

REL 343 - American Religions and the News Media

REL 345 - African American Religious History
REL 347 - Religion and the Conquest of America
REL 348 - Religion and American Consumerism
REL 449 - Religious Dimensions of Whiteness

## Religion in Society concentration

REL 101 - Religions of the World
REL 102 - Religion Today in a Globalizing World
REL 103 - Religion and Sports
REL 104 - Religion and Science
REL 165 - Discovering Islam
REL 221 - Morality and Community
REL 227 - Gods: A Cross-Cultural Gallery
REL 242 - Religious Issues in American Life
REL 252 - Ethical Decision Making
REL 283 - India's Religious Worlds
REL 326 - Religion and Film
REL 341 - Women, Abolition, and Religion in 19th Century America

REL 342 - Religion and Politics in the IsraeliPalestinian Conflict

REL 345 - African American Religious History
REL 347 - Religion and the Conquest of America
REL 348 - Religion and American Consumerism
REL 359 - Stem Cells and Society
REL 385 - Religion in Chinese Society
REL 465 - Beyond the Veil: Gender Politics in Islam

REL 487 - Global Hinduism

## Religious Thought and

Philosophical Inquiry concentration

REL 106 - What Is Belief?
REL 125 - Religion and Sexuality
REL 126 - Ecstasy, Transgression, Religion
REL 191 - Religion, Meaning and Knowledge
REL 261 - Faith and Reason in Islamic Thought and Civilization

REL 292 - The Human and Divine in Christian and Muslim Philosophy

REL 354 - Kierkegaard and Nietzsche
REL 357 - Queerly Religious
REL 371 - God in Political Theory
REL 393 - Extreme Religion
REL 394 - Sources of the Self: Finding the "I" in Religion \& Philosophy

REL 396 - Mysticism
REL 435 - Modern Jewish Thought
REL 461 - Enlightenment: Between European West and Islam

Morality and Ethics concentration
REL 221 - Morality and Community
REL 252 - Ethical Decision Making
REL 255 - Depth Psychology and Religious Ethics
REL 359 - Stem Cells and Society
REL 371 - God in Political Theory
REL 393 - Extreme Religion
REL 394 - Sources of the Self: Finding the "I" in Religion \& Philosophy

REL 551 - Ethics and the Health professions
REL 552 - Bioethics
Religion, Gender, and Sexuality concentration

REL 125 - Religion and Sexuality
REL 310 - Medieval Christianities
REL 326 - Religion and Film
REL 341 - Women, Abolition, and Religion in 19th Century America

REL 357 - Queerly Religious
REL 384 - Goddesses, Women and Power in Hinduism

REL 465 - Beyond the Veil: Gender Politics in Islam

## Religion, Art, and Literature concentration

REL 123 - Religious Auto/Biography
REL 223 - Faith, Doubt, and Fanaticism
REL 227 - Gods: A Cross-Cultural Gallery
REL 235 - Travel Narratives and Pilgrimages
REL 324 - Religions and Storytelling
REL 326 - Religion and Film
REL 364 - Enchanting Words: Muslim Poets, Singers and Storytellers

REL 367 - God and Beauty in Islamic Art
REL 392 - Music and the Sacred
REL 595 - Religion, Art, and Aesthetics

## Spirituality and Mysticism concentration

REL 126 - Ecstasy, Transgression, Religion
REL 261 - Faith and Reason in Islamic Thought and Civilization

REL 300 - Selected Topics Yoga?
REL 357 - Queerly Religious
REL 364 - Enchanting Words: Muslim Poets, Singers and Storytellers
REL 367 - God and Beauty in Islamic Art
REL 396 - Mysticism

## Additional Information

Students who qualify may earn a BA degree in Religion "with distinction." Qualifications and requirements for this special honor include:

- completion of the Religion major with a 3.5 GPA in program courses and a cumulative 3.4 GPA by the end of the senior year;
- study of at least one foreign language through the 201 (intermediate) level; and
- preparation for (REL 498,3 credits) and writing and defense of a senior thesis.
Students intending to pursue graduate study in religion are recommended to take at least one of their areas of concentration in Jewish Thought and Experience, Christian Thought and Experience, Islamic Thought and Experience, Asian Religious Thought and Experience, or Religion in the American Experience.
In certain cases, students may petition the Director of Undergraduate Studies to count courses listed under one concentration for a different concentration. However, under no circumstances can students use the same course to count for two or more concentrations (i.e., students may not "double-count").

Selected Topics courses (REL 100, 200, 300 or 400) and individual semesters of REL 320 ("Themes in the Study of Religion") may count toward fulfilling requirements for one of the areas of concentration at the determination of the Director of Undergraduate Studies. Graduatelevel courses (numbered 600 and above), taken by undergraduate students at the permission of the instructor, may also count toward fulfilling requirements for one of the areas of concentration above at the determination of the course instructor.

Both individualized work and outside courses may be approved to count for a student's
concentration requirements and/or the major requirement overall with the permission of the Director of Undergraduate Studies.

Russian and Central European Studies, BA<br>Gerald R. Greenberg<br>441 Hall of Languages<br>315-443-1414.

## Faculty

Patricia Burak, Gerald R. Greenberg, Erika Haber, Paul M. Hagenloh, Laurie Marhoefer, Zofia Sztechmiler, Brian D. Taylor, Karina von Tippelskirch
The Russian and Central European Studies major is an interdisciplinary program that has been designed with some flexibility in order to serve students who wish to focus their liberal arts education on Russian and Central European studies, as well as those who look forward to a career as specialists in Russian or Central European affairs.

## Major Requirements

Students are required to take at least 30 credits from the courses listed below. Up to 6 credits may be below the 300 level. In addition, students must complete 201 in GER, POL, RUS, or TRK (or other appropriate languages as instruction becomes available), or earn at least 3 credits at a higher level in a course taught in the language.

Languages, Literatures, and Linguistics

Any RUS, POL, TRK, or GER courses above the 201 level

## Anthropology

ANT 428 - Transformation of Eastern Europe

## Art and Music Histories

HOA 462 - European Art Between the Wars

## Geography

GEO 331 - The European Union

## History

HST 314 - Europe from Bismarck to the First World War

HST 315 - Europe in the Age of Hitler and Stalin
HST 316 - Europe Since 1945
HST 361 - Germany to World War I, 1770-1918
HST 363 - Germany Since 1945
HST 364 - The Origins of Modern Russia

HST 365 - Russia in the Twentieth Century
Literature in Translation
LIT 226 - Dostoevsky and Tolstoy
LIT 227 - Pasternak and Solzhenitsyn
LIT 331 - Russian Culture Through Fiction and Film
Philosophy
PHI 418 - Hegel, Marx, and Nietzsche

## Political Science

PSC 332 - Politics of Post Communist Europe
PSC 347 - Politics of Russia
PSC 372 - Marxist Theory
Russian Language, Literature, and Culture, BA

Gerald R. Greenberg
441 Hall of Languages
315-443-1414.

## Faculty

Gerald R. Greenberg, Erika Haber, Zofia Sztechmiler
The study of Russian language, literature, and culture provides more than just competence in reading, writing, and speaking the language. Students in this major, which leads to a B.A. degree, also learn about Russian literature, art, folklore, film, media, and business, and, hence, about the people and culture as well. Through courses in other departments, students may also investigate the history, philosophy, and political science of Russia.

Students are admitted to the major through departmental approval and should consult the Russian language coordinator about their majors as early as possible. Early consultation is particularly important for students with little or no preparation in Russian so they may be sure to satisfy prerequisites and requirements within four years.

## Major Requirements

To major in Russian, students complete the following requirements for either Option I or Option II.

## Option I

The program requires 25 credits in RUS courses, 4 of which may be in lower-division courses.

## Option II

The program requires 28 credits, 16 of which are
in RUS courses. (Of the 16 RUS credits, 4 may be in lower-division courses; the rest are in upperdivision courses.) The remaining 12 credits (6 of which are in upper-division courses) will be in relevant courses approved by the Russian faculty, taught in English in various departments.

## Study Abroad

To become more fluent in Russian and to gain additional insight into the Russian culture and its people, students are encouraged to study abroad. For further information on programs administered through Syracuse University, contact the Russian Language Program Coordinator or Syracuse University Abroad.

## Science Education-Biology (Dual), BA

## Science Education Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly
greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/ or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information
is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

The Professional Core Requires:
EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse

Student Needs
EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising
hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Biology

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.
In addition to the professional education requirements, students in science education complete the Bachelor of Arts or the Bachelor of Science* with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or fine arts related (3 credits)

One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* biology major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Biology majors typically use their chemistry sequence for this.

Note:
*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for biology

Science Education-Biology
(Dual), BS

## Science Education Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to
teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

The Professional Core Requires:
EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs
EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

Standard Student Teaching Semester (spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional
portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Biology

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.

In addition to the professional education requirements, students in science education complete the Bachelor of Arts or the Bachelor of Science* with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or fine arts related (3 credits)
One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* biology major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Biology majors typically use their chemistry sequence for this.

## Note:

*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for biology

Science Education-Chemistry (Dual), BA

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or
electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) ( 3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core

 CoursesThe professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to
plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

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Science Education-Chemistry

## Science Education Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:
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One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)
One humanities course (other than history (HST) or arts related) (3 credits)
One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* chemistry major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Chemistry majors typically use the required physics sequence for this.

## Note:

*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for chemistry.

Science Education-Chemistry (Dual), BS

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
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The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
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mathematics (MAT 112 may not meet this requirement) (3 credits)
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humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with
non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)* EDU 310 - The American School (3 credits)* RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester <br> (fall of the senior year)

Note: The semesters of registration listed are
for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester (spring of the senior year)

Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic
and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Chemistry

## Science Education Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences
(HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)
One humanities course (other than history (HST) or arts related) (3 credits)

One multicultural humanities or social science course (3 credits)

One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* chemistry major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Chemistry majors typically use the required physics sequence for this.

Note:
*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for chemistry.

Science Education-Earth Science (Dual), BA

Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in
both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements
for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program
assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be
necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Earth Science

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.

In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related (3 credits)
One multicultural humanities or social science course (3 credits)

One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education/earth science majors are required to complete no fewer than 30 credits in earth sciences. Because the B.A. in Earth Sciences may be completed with 25 credits in Earth Sciences, students in Science Education must take 5 additional credits. Four of these five credits must be AST 101 or 104.
In addition to the earth sciences requirements** or as part of the major's non-departmental science requirements, students must complete an introductory laboratory sequence in a second science area, not including astronomy - i.e., the second science sequence may be in BIO, CHE, or PHY. When choosing the second science area, earth sciences majors should keep prerequisites to upper division EAR courses in mind.

## Note:

** See specific departmental major course requirements for earth sciences.

## Science Education-Earth

 Science (Dual), BSArts and Sciences/Education (Dual)

## Arts and Sciences

 contact:Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly
greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/ or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information
is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

The Professional Core Requires:
EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse

Student Needs
EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising
hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Earth Science <br> Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/ or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:
One approved history (HST) course (3 credits)
One social science course (other than history
(HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related (3 credits)
One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education/earth science majors are required to complete no fewer than 30 credits in earth sciences. Because the B.A. in Earth Sciences may be completed with 25 credits in Earth Sciences, students in Science Education must take 5 additional credits. Four of these five credits must be AST 101 or 104.

In addition to the earth sciences requirements** or as part of the major's non-departmental science requirements, students must complete an introductory laboratory sequence in a second science area, not including astronomy - i.e., the second science sequence may be in BIO, CHE, or PHY. When choosing the second science area, earth sciences majors should keep prerequisites to upper division EAR courses in mind.

## Note:

** See specific departmental major course requirements for earth sciences.

Science Education-Physics (Dual), BA

Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and
professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs
EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

Standard Student Teaching Semester (spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional
portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Physics

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.

In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or a Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related) (3 credits)
One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education majors are required to complete a major of no less than 30 credits of physics (PHY) courses.
In addition to the physics requirements** students must complete an introductory laboratory sequence in BIO, CHE, or EAR.

## Note:

* The B.S. degree may be earned in the primary science area as an alternative to the B.A. with the completion of additional science requirements, paperwork, and an appropriate petition.
** See specific departmental major course requirements for physics.

Science Education-Physics (Dual), BS

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or
electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) ( 3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a
full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Physics

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or a Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)
One humanities course (other than history (HST) or arts related) (3 credits)
One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education majors are required to complete a major of no less than 30 credits of physics (PHY) courses.
In addition to the physics requirements** students must complete an introductory laboratory sequence in $\mathrm{BIO}, \mathrm{CHE}$, or EAR.

## Note:

* The B.S. degree may be earned in the primary science area as an alternative to the B.A. with the completion of additional science requirements, paperwork, and an appropriate petition.
** See specific departmental major course requirements for physics.


## Selected Studies in Arts and Sciences, BA

Shruti Viswanathan, Director, Advising and Academic Support 323 Hall of Languages, 315-443-3150.
The Selected Studies Program offers the student an opportunity to develop a highly individualized curricular plan. This program, which can lead to the B.A. or the B.S. degree, is intended to meet individual needs. It provides considerable freedom in curricular planning, but also requires greatly
increased responsibility on the part of the student.
Each student in the selected studies program develops a four-year program of study based on academic goals. He or she is assisted by a faculty advisor who helps to formulate an academically sound curriculum.

## Guidelines

Each Selected Studies Program provides for a total of at least 120 credits. Among the courses taken outside of the College of Arts and Sciences, no more than 24 credits may be taken in any one school or college of the University.
Proposals should avoid overspecialization. Proposals that seem to aim at narrow vocational training are likely to be rejected. Students whose applications indicate that they can best be served by a traditional major are likely to be rejected and referred to the appropriate department.
The B.A. in Selected Studies includes at least 90 credits of arts and sciences courses and a minimum of 60 credits in courses numbered at the 300-level or higher (upper division).

## Eligibility

Any student in good academic standing in the College of Arts and Sciences; with a GPA of 2.5; and with 30 credits of completed graded coursework at Syracuse University may apply for admission to the Selected Studies Program, subject to the following considerations:

Students are permitted to participate in the Selected Studies Program only after they have completed two semesters at Syracuse, but program proposals may be submitted for review at any time before the end of the junior year.
To assure timely approval, the student should submit the proposal to the director of academic advising and counseling services at least 60 days before the registration period for the programs first semester.
A student cannot be admitted to the Selected Studies Program later than the second semester of the junior year.

## Application

Students who wish to participate in the Selected Studies program should consult the Advising and Academic Support Office, 323 Hall of Languages, for a complete statement of procedures and requirements.

## Selected Studies in Arts and Sciences, BS

Shruti Viswanathan, Director, Advising and Academic Support

323 Hall of Languages, 315-443-3150.
The Selected Studies Program offers the student an opportunity to develop a highly individualized curricular plan. This program, which can lead to the B.A. or the B.S. degree, is intended to meet individual needs. It provides considerable freedom in curricular planning, but also requires greatly increased responsibility on the part of the student.

Each student in the selected studies program develops a four-year program of study based on academic goals. He or she is assisted by a faculty advisor who helps to formulate an academically sound curriculum.

## Guidelines

Each Selected Studies Program provides for a total of at least 120 credits. Among the courses taken outside of the College of Arts and Sciences, no more than 24 credits may be taken in any one school or college of the University.
Proposals should avoid overspecialization. Proposals that seem to aim at narrow vocational training are likely to be rejected. Students whose applications indicate that they can best be served by a traditional major are likely to be rejected and referred to the appropriate department.
The B. S. in Selected Studies Program contains at least 75 credits of arts and sciences courses and a minimum of 50 credits in courses numbered at the 300-level or higher (upper division). It includes a minimum of 36 credits of courses in departments offering the B.S. degree at Syracuse University and exhibit a specialization of no more than 60 credits justifying the title of the program.

## Eligibility

Any student in good academic standing in the College of Arts and Sciences; with a GPA of 2.5 ; and with 30 credits of completed graded coursework at Syracuse University may apply for admission to the Selected Studies Program, subject to the following considerations:
Students are permitted to participate in the Selected Studies Program only after they have completed two semesters at Syracuse, but program proposals may be submitted for review at any time before the end of the junior year.
To assure timely approval, the student should submit the proposal to the director of academic advising and counseling services at least 60 days before the registration period for the programs first semester.
A student cannot be admitted to the Selected Studies Program later than the second semester of the junior year.

## Application

Students who wish to participate in the Selected Studies program should consult the Advising and Academic Support Office, 323 Hall of Languages, for a complete statement of procedures and requirements.

## Selected Studies, BA

Shruti Viswanathan, Director, Advising and Academic Support
323 Hall of Languages,
315-443-3150.
The Selected Studies Program offers the student an opportunity to develop a highly individualized curricular plan. This program, which can lead to the B.A. or the B.S. degree, is intended to meet individual needs. It provides considerable freedom in curricular planning, but also requires greatly increased responsibility on the part of the student.

Each student in the Selected Studies Program develops a four-year program of study based on academic goals. He or she is assisted by a faculty advisor who helps to formulate an academically sound curriculum.

## Guidelines

Each Selected Studies Program provides for a total of at least 120 credits. Among the courses taken outside of the College of Arts and Sciences, no more than 24 credits may be taken in any one school or college of the University.
Proposals should avoid overspecialization. Proposals that seem to aim at narrow vocational training are likely to be rejected. Students whose applications indicate that they can best be served by a traditional major are likely to be rejected and referred to the appropriate department.

The B.A. in Selected Studies includes at least 90 credits of arts and sciences courses and a minimum of 60 credits in courses numbered at the 300-level or higher (upper division).

## Eligibility

Any student in good academic standing in the College of Arts and Sciences; with a GPA of 2.5 ; and with 30 credits of completed graded coursework taken at Syracuse University may apply for admission to the Selected Studies Program, subject to the following considerations:

Students are permitted to participate in the Selected Studies Program only after they have completed two semesters at Syracuse, but program proposals may be submitted for review at any time before the end of the junior year.

To assure timely approval, the student should submit the proposal to the Director of Advising
and Academic Support at least 60 days before the registration period for the program's first semester.
A student cannot be admitted to the Selected Studies program later than the second semester of the junior year.

## Application

Students who wish to participate in the Selected Studies program should consult Advising and Academic Support, 323 Hall of Languages, for a complete statement of procedures and requirements.

## Selected Studies, BS

Shruti Viswanathan, Director, Advising and Academic Support
323 Hall of Languages,
315-443-3150.
The Selected Studies Program offers the student an opportunity to develop a highly individualized curricular plan. This program, which can lead to the B.A. or the B.S. degree, is intended to meet individual needs. It provides considerable freedom in curricular planning, but also requires greatly increased responsibility on the part of the student.
Each student in the Selected Studies Program develops a four-year program of study based on academic goals. He or she is assisted by a faculty advisor who helps to formulate an academically sound curriculum.

## Guidelines

Each Selected Studies Program provides for a total of at least 120 credits. Among the courses taken outside of the College of Arts and Sciences, no more than 24 credits may be taken in any one school or college of the University.
Proposals should avoid overspecialization.
Proposals that seem to aim at narrow vocational training are likely to be rejected. Students whose applications indicate that they can best be served by a traditional major are likely to be rejected and referred to the appropriate department.

The B. S. in Selected Studies Program contains at least 75 credits of arts and sciences courses and a minimum of 50 credits in courses numbered at the 300-level or higher (upper division). It includes a minimum of 36 credits of courses in departments offering the B.S. degree at Syracuse University and exhibit a specialization of no more than 60 credits justifying the title of the program.

## Eligibility

Any student in good academic standing in the College of Arts and Sciences; with a GPA of
2.5; and with 30 credits of completed graded coursework taken at Syracuse University may apply for admission to the Selected Studies Program, subject to the following considerations:

Students are permitted to participate in the Selected Studies Program only after they have completed two semesters at Syracuse, but program proposals may be submitted for review at any time before the end of the junior year.

To assure timely approval, the student should submit the proposal to the Director of Advising and Academic Support at least 60 days before the registration period for the program's first semester.

A student cannot be admitted to the Selected Studies program later than the second semester of the junior year.

## Application

Students who wish to participate in the Selected Studies program should consult Advising and Academic Support, 323 Hall of Languages, for a complete statement of procedures and requirements.

## Social Studies Education (Dual), BA

Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40
credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching

Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy ( 3 credits required)

## Standard Student Teaching Semester

 (spring of the senior year)Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both
colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Social Studies Education

## Contact:

Jeffery Mangram, 150 Huntington Hall, 315-4432685 or jamangra@syr.edu

In addition to the professional education requirements, students in social studies education complete the Bachelor of Arts in a social science subject area and the following requirements:

## Liberal Arts Core Specific Requirements

Social studies education majors must complete the Liberal Arts Core curriculum with these additional specific requirements:

One mathematics course-Statistics (MAT 121 or MAT 221) is recommended (can also meet one of the program's research requirements) (3 credits)

One arts related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or fine arts (HOA or HOM)) (3 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Social Studies Content

Social studies majors are required to complete a major in an area chosen from African American studies, anthropology, economics, geography, history, international relations, political science, policy studies, or sociology. If African American Studies, anthropology, or geography, all courses other than required courses must be social science classes. Because 18 credits of history are required, no matter what social science major is chosen, most students complete the history major.

If history is not the chosen major, the following 18
credits of history must also be completed: HST 101 - American History to 1865
HST 102 - American History Since 1865
HST 111 - Early Modern Europe, 1350-1815
HST 112 - Modern Europe: Napoleon to the Present

One nonwestern history course (3 credits)
One upper-division history (300-level or above) by advisement (3 credits)

## Additional Information

All majors must complete a course in economics (ECN), political science (PSC), human/cultural geography (GEO) from the social science list and one course from a list of approved "global" courses (which may overlap with other requirements).

All majors must complete EDU 522 - Social Studies and Democracy: The Reconstruction of Education and three other courses that are considered social science research methods or theory based courses.

## Note:

* See specific departmental major course requirements for your chosen content major.


## Sociology, BA

## Chair:

Madonna Harrington Meyer
302 Maxwell Hall,
315-443-2346.
Amy Lutz, Undergraduate Director
426 Eggers Hall
315-443-3842

## Faculty

Dawn Dow, Cecilia A. Green, Madonna Harrington Meyer, Prema Kurien, Andrew S. London, Amy Lutz, Yingyi Ma, Jennifer Montez, Jackie Orr, Arthur Paris, Gretchen Purser, Rebecca Schewe, Merril Silverstein, Janet Wilmoth

The undergraduate major in Sociology is designed to provide students with both a broad introduction to the field and an opportunity for concentration within the specialty areas of the department. In addition to required courses in sociological theory and qualitative and quantitative research methods, the department offers a variety of substantive courses in inequality studies (e.g., gender, class, race / ethnicity, sexuality, and disability); health; education; immigration; family, aging and the life course; population studies; criminology and criminal justice; and social policy.

In addition to substantive specialization in Sociology, the major emphasizes skill development in the areas of analytic reasoning, analytic writing, computer literacy, elementary qualitative and quantitative research, information retrieval, and report presentation. Opportunities for internship experiences and/or assisting in faculty research projects are available and encouraged. Majors are encouraged to participate in a senior research seminar culminating in a symposium where they present the results and interpretation of their own research project. The department has an active Sociology Club and offers an annual undergraduate paper award that is supported by a generous gift from a donor.

## Major Requirements

Students are required to take 30 credits in Sociology, including
SOC 101 - Introduction to Sociology
SOC 318 - Introduction to Research
SOC 319- Qualitative Methods in Sociology or
WGS 317 - Qualitative Methods in Sociology
SOC 406 - Sociological Theory

## Additional Six Courses

The 30 credits include an additional six courses, five of which must be numbered above 299 (one of the additional courses may be taken at the 200 level). Students may choose to complete a senior thesis (SOC 495) to fulfill one of the substantive courses.

Recommended for those Planning Graduate Study in the Social Sciences

SOC 513 - Statistics for Social Science

## Before Enrolling in the Other Courses

Students are advised to take
SOC 101 - Introduction to Sociology

## Additional Information

The required research methods courses should be taken in the sophomore or junior year.

Spanish Education (Dual), BA
Spanish Education

## Contact:

M. Emma Ticio328 HBC, 315-443-5488 or mticioqu@syr.edu

In addition to the professional education requirements, students in Spanish education complete a major in Spanish and the following requirements:

## Liberal Arts Core Specific Requirements

Secondary Spanish education majors must complete the Liberal Arts Core curriculum with these additional specific requirements:
One mathematics (MAT) course from Liberal Arts Core Quantitative Skills List or MAT 117 or MAT 118 (3 credits)

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts related course within Arts and Sciences (HOA or HOM, or other approved humanities course focusing on one or more of the arts) (3 credits)

## Additional Information

If available, these may be courses taught in Spanish.

## Spanish Content

Spanish Education students must complete the Spanish Language, Literature and Culture major as defined by the Languages, Literature and Linguistics Department, with additional Spanish credits.. 33 credits are required at the 300 level and above, with 21 ( 7 courses) of these at the 400 level. Spanish Education students must complete the following courses (including some not required of other Spanish majors) within their programs, with 15 of the course credits completed on the SU campus:

SPA 301 - Approaches to Reading Texts
SPA 302 - Advanced Language Usage
SPA 321 - Introduction to Spanish Literature
SPA 322 - Introduction to Latin American Literature

SPA 435 - Spanish Phonetics and Phonology
SPA 436 - The Structure of Spanish
SPA 4XX - 1 course of Latino Literature ( 3 credits)
SPA 4XX - 2 courses of Latin American Literature ( 6 credits)
SPA 4XX - 2 courses of Spanish Peninsular Literature (6 credits)

## Additional Information

LIN 421 and SPA 403 do not count toward the required 90 Arts and Sciences credit. EDU 310 does count toward the required 90 Arts and Sciences credits.

If study abroad is planned, it may not be completed in the spring of the junior year or in the senior year because of required on-campus courses.

## Spanish Language, Literature and Culture, BA

Myrna García Calderón
Languages, Literatures, and Linguistics
310 HB Crouse
315-443-9489
The B.A. in Spanish language, literature, and culture offers cross-disciplinary exposure to the various literary genres and linguistic analyses of Spanish, South American, Central American, Caribbean, and Latino cultures. The language and history of the regions encourage students to formulate diverse theoretical models and cultural perspectives, which may be applied to a variety of career options. Courses range from the beginning level through a series of 300- and 400-level courses that allow students to pursue a major or minor in Spanish. All students with more than one year of high school Spanish are required to take a placement examination, which is given every fall. Students who do not take the exam in the fall should consult the Spanish language coordinator about their placement. The examination is a requirement for all students regardless of class standing.
First-year students need permission to enroll in courses numbered 300 or above. SPA 202 or its equivalent is a prerequisite for courses numbered 300 and above. Students, including transfers, with credits earned in Spanish, should consult the major advisor of Spanish as early as possible. Early consultation is also important for students with little or no preparation in Spanish so they may be sure to satisfy prerequisites and requirements within four years.

## Study Abroad

To become fluent in the language and to learn about other cultures and people, students are encouraged to study abroad for a semester or a year. Syracuse University's programs in Madrid, Spain and Santiago de Chile allow students to take fully accredited courses in Spanish language and literature, anthropology, fine arts, history, political science, and public communication. Students should take all of their courses in Spanish. Students choosing Spanish as a major are encouraged to take advantage of the study abroad program in Madrid or Santiago. Through the Dominican Republic Consortium students also have the opportunity to study in the Caribbean. For further information, contact the Spanish program coordinator or Syracuse University Abroad, 106 Walnut Place.

## Major Requirements

The major in Spanish consists of 30 credits in upper division courses taught in Spanish. Three credits from SPA 202 may be applied to the major. SPA 301 - Approaches to Reading Texts is a requirement for all majors and minors. It is recommended that students take SPA 301 immediately following SPA 202 and before entering any 400-level course. At least 6 credits of 300 -level courses should be taken before entering the 400 level, but it is not a requirement. Six courses ( 18 credits) are required at the 400 level and must include the following distribution:
2 courses in Spanish Peninsular Literature, 2 courses in Latin American Literature, 1 course in Latino Literature, and 1 course in Spanish Linguistics. Courses with the number 400 are special topics courses and will be accepted as distribution requirements according to the course title. Courses offered through SU Abroad in Madrid and in Santiago, Chile that have been approved by the Spanish program will be accepted for distribution requirements. At least 15 credits of SPA coursework must be taken on the Syracuse campus.

## 400-LEVEL COURSES IN FULFILLMENT OF THE MAJOR

## Spanish Peninsular

SPA 417 - History of Women in Spain
SPA 459 - Contemporary Spanish Cinema
SPA 400 - Selected Topics in Spanish Gender, Politics, and Race in Contemporary Spanish Short Story (offered in Spain)

SPA 441 - Medieval and Golden Age Literature
SPA 451 - Identities and Cultures of Spain
SPA 455 - Romantics and Realists: Gender Politics in Spanish Literature and Film

SPA 457 - Civil War to Contemporary Spanish Literature and Culture

SPA 458-20th Century Spanish Theater

## Latin American Literature

SPA 461 - Nobel Prize Writers of the SpanishSpeaking World

SPA 462 - Border Culture
SPA 463 - Contemporary Latin American Theater
SPA 465 - Literature and Popular Culture
SPA 467 - Film and Literature
SPA 471 - Contemporary Latin American Literature
SPA 475 - Women, Myth and Nation in Latin American Literature

SPA 479 - Perspectives on Mexico and Central

America: Literature, Art, Film
SPA 489 - Hispanic Caribbean Narrative and Film
SPA 493 - Afro-Hispanic Topics in Caribbean Literature

SPA 494 - Hispanic Caribbean Literature
SPA 495 - Marginal Cultures in Hispanic Caribbean Literature

SPA 497 - Text and Context in Cuban Revolutionary Literature

SPA 498 - Citizenship and Urban Violence in Latin America

HST 424 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone

## Latino Literature requirement

SPA 481 - The Literature of Latinos in the United States

SPA 400 - Selected Topics in Spanish Varied Topics in US Latina/ Literature

## Spanish Linguistics requirement

SPA 435 - Spanish Phonetics and Phonology
SPA 436 - The Structure of Spanish
SPA 437 - Introduction to Spanish Linguistics
SPA 438 - History of the Spanish Language
SPA 439 - Community Outreach: Language in Action
SPA 400 - Selected Topics in Spanish Perfection of Spanish (offered in Spain)

## Women's and Gender Studies, BA

## Department of Women's and Gender Studies

208 Bowne Hall
315-443-3707, Fax: 315-443-9221
Office Coordinator:
Alice Loomis
315-443-3707

## Administrative Specialist:

Susann DeMocker-Shedd

315-443-3560

## Faculty

Kal Alston, Himika Bhattacharya, Pedro DiPietro, Vivian M. May, Chandra Talpade Mohanty, Dana M. Olwan, Gwendolyn D. Pough, Robin Riley

Women's and Gender Studies integrates theory
and practice with the aim of transforming social relations, representations, knowledges, institutions, and policies. Through interdisciplinary and comparative approaches, students engage in the study of gender intersectionally and transnationally as a means of understanding the complex ways that ideas and practices about gender, past and present, shape the world around us. Issues of justice, social and economic transformation, and women's agency are central and at each level of study the curriculum emphasizes race, ethnicity, nationality, class, age, sexuality, and different abilities as categories of analysis.

## Major Requirements

The B.A. in women's and gender studies requires a minimum of 33 credits (at least 18 in courses numbered 300 and above) selected from courses listed below. Although the major is granted and administered under the auspices of the College of Arts and Sciences, students are able, and in some cases encouraged, to take elective courses in the professional schools. Requirements for the major include five core courses, three courses from the course grouping Power, Privilege, and Exclusion in Feminist Thought; and three electives, two core electives and one general elective selected from a list of approved cross-listed courses. In the senior year, majors may create a synthesis of their studies in the field and deepen their skills in women's and gender studies research, culminating in an independent project that can be a research project, creative work, or activism project. Note: Students seeking Academic Distinction in Women's and Gender Studies must register for WGS 498 - Senior Project in Women's \& Gender Studies.

## Study Abroad

Women's and Gender Studies Focus Abroad is coordinated through the Syracuse University Abroad office in more than five countries. All of these international centers offer a number of interdisciplinary courses in women's and gender studies, cross-listed with the humanities and social sciences. Summer Studies Abroad courses are also available. For specific information on course offerings abroad, contact the SU Abroad office at 315-443-3471.

## B.A. Degree Requirements

Required Core Courses (15 credits)
WGS 101 - Introduction to Women's and Gender Studies
WGS 201 - Transnational Feminist Studies
WGS 301 - Feminist Theories

WGS 310 - Feminist Inquiries
WGS 410 - Advanced Studies in Feminist Thought
Required Core Cluster Power, Privilege, and Exclusion in Feminist Thought (9 credits)
One course must be selected from each of the following three areas: Sexuality; Class; and Race, Nationality, and/or Ethnicity.

## Sexuality (3 credits)

WGS 192 - Gender and Literary Texts
WGS 230 - Intergroup Dialogue (depending on topic)

WGS 305 - Sociology of Sex and Gender
WGS 309 - Race, Gender and Sexuality in the African Diaspora

WGS 319 - Gender and Politics
WGS 355 - Sociology-of Health and IIIness
WGS 360 - Topics in Reading Gender and Sexualities

WGS 362 - Youth, Schooling and Popular Culture
WGS 365 - Negotiating Difference:Coming of Age Narratives

WGS 389 - LGBT History
WGS 395 - Gender and Popular Culture
WGS 414 - Communication \& Gender
WGS 425 - Feminist Organizations
WGS 433 - Race, Class, and Gender
WGS 435 - Sexual Politics
WGS 438 - Trans Genders and Sexualities
WGS 439 - Women, Gender and Violence in a Transnational Context

WGS 441 - Topics in Feminist Philosophy
WGS 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism
WGS 447 - Sexualities and Genders in World Teen Culture

WGS 449 - Women in Art
WGS 452 - Feminism and Postcolonial Studies
WGS 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies
WGS 456 - LGBT Studies in Sociology
WGS 465 - Beyond the Veil: Gender Politics in Islam

WGS 473 - Women, Rap and Hip-Hop Feminism
WGS 494 - Music and Gender
WGS 576 - Gender, Place, and Space

## Class (3 credits)

WGS 248 - Ethnic Inequalities and Intergroup Relations

WGS 258 - Poverty and Discrimination in America
WGS 281 - Sociology of Families
WGS 318 - American Social Movements
WGS 325 - Economics and Gender
WGS 326 - Persons in Social Context
WGS 335 - American Social and Cultural History
WGS 343 - Latina Feminist Theories
WGS 354 - Gender, Militarism, and War
WGS 355 - Sociology-of Health and IIIness
WGS 358 - Economics of US Poverty and Discrimination
WGS 363 - Anthropology of Family Life
WGS 364 - Aging and Society
WGS 422 - Work and Family in the 21st Century
WGS 425 - Feminist Organizations
WGS 427 - New York City: Black Women Domestic Workers

WGS 432 - Gender and Disability
WGS 433 - Race, Class, and Gender
WGS 436 - Feminist Rhetoric(s)
WGS 439 - Women, Gender and Violence in a Transnational Context

WGS 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism
WGS 472 - Language, Culture, and Society
WGS 473 - Women, Rap and Hip-Hop Feminism
WGS 492 - Work and Inequality
WGS 555 - Food, Culture and Environment
WGS 576 - Gender, Place, and Space
Race, Nationality, and/or Ethnicity (3 credits)
WGS 230 - Intergroup Dialogue (depending on topic)
WGS 248 - Ethnic Inequalities and Intergroup Relations
WGS 297 - Philosophy of Feminism
WGS 303 - Black Women Writers
WGS 307 - African Women Writers
WGS 309 - Race, Gender and Sexuality in the African Diaspora
WGS 324 - Modern South Asian Cultures
WGS 327 - Africa Through the Novel
WGS 328 - Human Diversity in Social Contexts

WGS 341 - Women, Abolition, and Religion in 19th Century America
WGS 343 - Latina Feminist Theories
WGS 354 - Gender, Militarism, and War
WGS 355 - Sociology-of Health and IIIness
WGS 365 - Negotiating Difference:Coming of Age Narratives
WGS 367 - Gender in a Globalizing World
WGS 371 - Gender in Latin American History
WGS 379 - Gender, Race, and Colonialism
WGS 384 - Goddesses, Women and Power in Hinduism
WGS 395 - Gender and Popular Culture
WGS 403 - African and Caribbean Women Writers
WGS 425 - Feminist Organizations
WGS 427 - New York City: Black Women Domestic Workers
WGS 433 - Race, Class, and Gender
WGS 436 - Feminist Rhetoric(s)
WGS 439 - Women, Gender and Violence in a Transnational Context
WGS 444 - Schooling \& Diversity *
WGS 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism
WGS 447 - Sexualities and Genders in World Teen Culture

WGS 452 - Feminism and Postcolonial Studies
WGS 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies
WGS 455 - Culture and AIDS
WGS 465 - Beyond the Veil: Gender Politics in Islam
WGS 472 - Language, Culture, and Society
WGS 475 - Women, Myth and Nation in Latin American Literature
WGS 512 - African American Women's History
WGS 513 - Toni Morrison: Black Book Seminar
WGS 553 - Women and Social Change

## Core Electives ( 6 credits):

Students must complete two core elective courses from the following:
WGS 240 - Topics in Contemporary Feminisms
WGS 300 - Selected Topics (if taught by core WGS faculty)

WGS 343 - Latina Feminist Theories
WGS 354 - Gender, Militarism, and War
WGS 365 - Negotiating Difference:Coming of Age Narratives

WGS 395 - Gender and Popular Culture
WGS 400 - Selected Topics (if taught by core WGS faculty)
WGS 410 - Advanced Studies in Feminist Thought
WGS 425 - Feminist Organizations
WGS 436 - Feminist Rhetoric(s)
WGS 438 - Trans Genders and Sexualities
WGS 439 - Women, Gender and Violence in a Transnational Context
WGS 447 - Sexualities and Genders in World Teen Culture

WGS 452 - Feminism and Postcolonial Studies
WGS 453 - Feminisms, Sexualities, and Human
Rights in Middle Eastern Societies
WGS 473 - Women, Rap and Hip-Hop Feminism
WGS 498 - Senior Project in Women's \& Gender Studies
WGS 500 - Selected Topics (if taught by core WGS faculty)

## General Electives (3 credits)

Students must complete one elective course. They may choose from any WGS course.

## Note:

*Course content varies each semester or by section. These courses may be counted toward women's and gender studies only when the content of the courses is within the field of feminist studies. Selected topics (400/500) courses may apply when appropriate.

## Writing and Rhetoric, BA

Lois Agnew, Writing Program Chair and Director
239 H.B. Crouse
315-443-1083

## Faculty

Lois Agnew, Patrick W. Berry, Collin G. Brooke, Margaret Himley, Krista Kennedy, Rebecca Moore Howard, Brice Nordquist, Stephen Parks, Eileen E. Schell, Tony Scott
In addition to offering both a major and a minor, the Writing Program coordinates and facilitates writing instruction across the curriculum within the University. The goal of the Writing Program is to integrate writing with reading and critical thinking in all disciplines and to encourage continuing development of these abilities. The program cooperates with other units to help writers and teachers achieve these goals.
Syracuse University students usually take WRT 105 - Studio 1: Practices of Academic Writing and WRT 205 - Studio 2: Critical Research and Writing.

Writing Studios 1 and 2 serve as pre-requisites for upper-division writing courses. Students may begin the major before completing WRT 205.
WRT 105-taken in the first semester of the first year-focuses on the study and practice of writing processes, including critical reading, collaboration, revision, editing, and the use of technologies. Academic writing-especially analysis and argumentation-is the focus.

WRT 205-normally taken in the spring of the second year-builds on the work of WRT 105 and the experiences of writing during the first year. Students study and practice critical, researchbased writing, including research methods, presentation of ideas and information, and source evaluation.

At the upper division level, students may take advanced courses in civic, researched, digital, and professional writing, style and editing, and in creative nonfiction, as well as study rhetoric and identity, information technologies, literacy, and the politics of language and writing.
The Writing Program is also home to The Writing Center (H.B.Crouse 101; 315-443-5289), a resource for all writers at Syracuse University. See our web site at wrt.syr.edu for more information.

## Major Requirements

To qualify for a B.A. degree in Writing and Rhetoric, students complete a total of 30 credits of coursework. These credits include the required core courses WRT 255, WRT 302, WRT 307, WRT 413, three courses from Genres and Practices, and three courses from Writing Histories and Theories.

## Required Core Courses (12 credits)

WRT 255 - Advanced Argumentative Writing
WRT 302 - Advanced Writing Studio: Digital Writing
WRT 307 - Advanced Writing Studio: Professional Writing
WRT 413 - Rhetoric and Ethics
Genres and Practices ( 9 credits)
(students select 3)
WRT 301 - Advanced Writing Studio: Civic Writing
WRT 303 - Advanced Writing Studio: Research and Writing

WRT 308 - Advanced Writing Studio: Syle
WRT 331 - Peer Writing Consultant Practicum
WRT 340 - Advanced Editing Studio
WRT 417 - Technical Documentation \& Usability
WRT 419 - Advanced Technical Writing Workshop

WRT 422 - Studies in Creative Nonfiction *
WRT 427 - Emerging Technologies in Professional \& Technical Writing

WRT 470 - Experience Credit (community or business-based internships: wrt.syr.edu/ internships/)

## Approved Genres and Practices nonWRT courses**

ETS 401 - Advanced Writing Workshop: Poetry
ETS 403 - Advanced Writing Workshop: Fiction
NEW 205 - News Writing
PRL 214 - Writing for News and Public Relations in a Digital Age

## Histories and Theories (9 credits)

(students select 3)
WRT 423 - African American Rhetoric
WRT 424 - Studies in Writing, Rhetoric, Identity *
WRT 426 - Studies in Writing, Rhetoric, and Information Technology *

WRT 428 - Studies in Composition, Rhetoric and Literacy *

WRT 436 - Feminist Rhetoric(s)
WRT 437 - Rhetoric and Information Design
WRT 440 - Studies in the Politics of Language and Writing *

WRT 447 - Professional \& Technical Writing in Global Contexts

Approved Histories and Theories nonWRT courses**

CRS 336 - Communication and Organizational Diversity

CRS 338 - Communication in Organizations
CRS 355 - Political Communication
CRS 414 - Communication \& Gender
CRS 455 - Rhetorical Criticism
CRS 483 - Rhetoric of Film
ETS 325 - History and Varieties of English
ETS 420 - Topics in Cultural Production and Reception

ETS 440 - Topics in Theorizing History and Culture

## Note:

*These courses are repeatable.
**At most, a total of two approved non-WRT courses ( 6 credits) from the above lists can be used toward the major.

## Distinction in Writing and Rhetoric

Students may earn the award of Distinction in Writing if the following criteria are met. First, the student must have an overall cumulative GPA of 3.4 and a minimum GPA of 3.5 in WRT after taking at least four Writing and Rhetoric major courses to be eligible to enroll in WRT 495 Senior Research Seminar I and WRT 496 - Senior Research Seminar II. Second, the student must complete a total of 3 credits in WRT 495 and WRT 496 and a thesis-length independent research or creative project. Third, the student must complete the senior year with a minimum cumulative GPA of 3.4 and GPA of 3.5 in the Writing and Rhetoric major courses.

## The Electronic Portfolio

All Writing majors are encouraged to produce and maintain an electronic writing portfolio. This portfolio allows students in the Writing major to archive and demonstrate their expertise within and across multiple genres and rhetorical contexts. Electronic writing portfolios serve as a record of each student's development and growth as a writer over their course of study and should not be limited to a specific number of writing products. The student, in consultation with his or her advisor and informal faculty mentors, is ultimately responsible for deciding what will be included in the electronic portfolio and how that portfolio will be shaped for specific purposes: professional, academic, public, and creative or a combination of two or more. Students may want to create portfolio "chapters" or segments, which encompass different genres, purposes, and audiences.

## Minor

## Advocacy and Public Rhetoric Minor

Stephen Parks
239 HBC
sjparks@syr.edu
315-443-1912
John Burdick
209 Maxwell Hall
jsburdic@syr.edu
315-443-3822
The undergraduate minor in rhetoric and public advocacy is an interdisciplinary program supported by the Writing Program in the College of Arts and Sciences, the Department of Communication and Rhetorical Studies and the program for the advancement of research on conflict and collaboration in the Maxwell School of Citizenship and Public Affairs.

The 18-credit minor explores the connections between advocacy, as a pragmatic practice for social change, and rhetoric, as a historical tradition of public argument, within national and local contexts. Students understand advocacy as a practice that includes public argument and reasoning in multiple contexts as well as how each context demands its own set of unique actions. In this way, the minor offers intellectual and practical tools.

The minor is designed to be of interest to those wishing to learn about the emergence of key public issues; the larger political, social, and economic framework out of which they emerge; and how different constituencies respond. You learn to assess competing interests within a public issue as well as engage in local, regional, and national advocacy campaigns. By the completion of the minor, you come to understand advocacy as a necessary part of citizenship.

## Admissions requirements

The minor is open to all undergraduate SU students with a minimum GPA of 3.0.

## Curricular requirements

## Advocacy and Public Rhetoric Courses ( 9 credits):

Choose either ANT 483 or WRT 301 (which will have a community-based component) as well as two others from the following list:
ANT 475 - Culture and Disputing (Every 2 Years)
ANT 483 - Social Movement Theory (Every 2 years, Fall)
CRS 225 - Public Advocacy (Every Semester)
CRS 553 - American Public Address (Every Year)
LIN 471 - Dimensions of Bilingualism and Multiculturalism (Every Year)
PAF 101 - An Introduction to the Analysis of Public Policy (Every Semester)
PAF 421 - Mediation:Theory and Practice (IR)
ANT 424 - Negotiation: Theory and Practice (Yearly)
PAF 424 - Conflict Resolution in Groups (IR)
PSC 328 - American Social Movements
PSC 354 - Human Rights and Global Affairs (Every Year)
WRT 255 - Advanced Argumentative Writing (Every Year/Term)
WRT 301 - Advanced Writing Studio: Civic Writing (Every Year)
WRT 302 - Advanced Writing Studio: Digital Writing (Every Year)

WRT 440 - Studies in the Politics of Language and Writing (Every Year)

## Advocacy and Public Rhetoric Subject Areas (9 Credits)

Three courses in one category, unless prior approval from advisors.

## Labor

GEO 273 - World Political Economy (Every Years)
GEO 361 - Global Economic Geography
GEO 463 - Geography of Homelessness (Even Years)
GEO 573 - The Geography of Capital (Odd Years)
HST 345 - Workers and Organized Labor in U.S. History, 1840 to Present
PSC 372 - Marxist Theory (Every Year)

## Environment

EST 361 - History of the American Environmental Movement

GEO 103 - Environment and Society (Every Semester)
GEO 203 - Society and the Politics of Nature
GEO 215 - Global Environmental Change (Every Year)
GEO 340 - Geography of Oil (Even Years)
GEO 353 - Geographies of Environmental Justice (Even Years)

GEO 400 - Selected Topics Geographies of Water (Taught in Even Years)
GEO 415 - Food: A Critical Geography (Even Years)
GEO 356 - Environmental Ideas and Policy (Every Year)
GEO 374 - Environment and Development in the Global South (Every Year)
PAF 451 - Environmental Policy (Every Year/ Semester)
PSC 302 - Environmental Politics and Policy (Every Year/Spring)

## Urban Communities

ANT 414 - Cities, Spaces and Power (Every 2 Years)

CRS 535 - Communication \& Community (Every Year)
GEO 362 - The European City (Every Year)
GEO 563 - The Urban Condition Life and Struggle in the Contested City
GEO 564 - Urban Historical Geography (Odd Years)
LIN 481 - Global Communication Through World

Englishes (Every Year/Fall)
MAX 132 - Global Community (Every Year/ Semester)
PSC 354 - Human Rights and Global Affairs (Every Year/Fall)

## African American Studies Minor

## Chair

Kishi Animashaun Ducre
200 Sims Hall
315-443-4302

## Faculty

Omanii Abdullah, Joan Bryant, Horace Campbell, Linda Carty, David Kwame Dixon, Kishi Animashaun Ducre, Casarae Gibson, Janis A. Mayes, Herbert Ruffin, S.N. Sangmpam, Renate Simson, Kheli R. Willetts, James G. Williams
This interdisciplinary department offers the opportunity for study, research, and community involvement in African American Studies and enables students to explore cultural, literary, historical, socioeconomic and other issues affecting African Americans as well as links with continental Africa and Caribbean areas.
To complete a minor in African American Studies, students take 18 credits, of which 12 must be in courses numbered above 299. Six credits must be taken in the introductory prerequisites.

## Introductory Prerequisites (6 credits)

## Required

AAS 112 - Introduction to African American Studies in Social Sciences

## And choose 3 credits from:

AAS 231 - African American Literature to 1900: An Introduction
AAS 232 - African American Lliterature: Twentieth and Twenty-First Centuries

## And choose 3 credits from:

AAS 332 - African American History: Through the 19th Century
AAS 333 - African American History: After the 19th Century

## Minor Credits (3 courses above 299)

Students must choose three subfield specialization courses from the two tracks below:

## Humanities Track

AAS 300 - Selected Topics in African American Studies * or

AAS 400 - Selected Topics in African American Studies * or

AAS 500 - Selected Topics in African American Studies *

AAS 302 - Contemporary African American Theater
AAS 303 - Black Women Writers
AAS 304 - Workshop:African American Theater
AAS 305 - African Orature
AAS 307 - African Women Writers
AAS 310 - Elements of Theater Production
AAS 327 - History of Southern Africa
AAS 331 - The African American Novel: Twentieth and Twenty-First Centuries
AAS 332 - African American History: Through the 19th Century

AAS 333 - African American History: After the 19th Century

AAS 338 - Creative Writing Workshop
AAS 345 - African American Religious History
AAS 361 - Art of the Black World
AAS 367 - Protest Movements \& African American Artists:19th \& 20th Centuries

AAS 380 - International Course * or
AAS 480 - International Course * or
AAS 580 - International Course *
AAS 390 - Independent Study * or
AAS 490 - Independent Study * or
AAS 590 - Independent Study *
AAS 402 - Slavery and Abolition
AAS 403 - African and Caribbean Women Writers
AAS 408 - Masters of American Black Music
AAS 409 - History of Jazz, 1940 to Present
AAS 433 - Harlem Renaissance:Literature and Ideology

AAS 465 - The Image of Blacks in Art and Film
AAS 470 - Experience Credit Internship in African American Studies *

AAS 500 - Selected Topics Seminar in African American Studies *

AAS 510 - Studies in African American History
AAS 512 - African American Women's History
AAS 513 - Toni Morrison: Black Book Seminar
AAS 540 - Seminar:African American Studies *

## Social Sciences Track

AAS 300 - Selected Topics in African American Studies * or

AAS 400 - Selected Topics in African American Studies * or

AAS 500 - Selected Topics
AAS 305 - African Orature
AAS 306 - African American Politics
AAS 309 - Race, Gender and Sexuality in the African Diaspora

AAS 312 - Pan Africanism
AAS 325 - Africa to 1800
AAS 326 - Africa Since 1800
AAS 332 - African American History: Through the 19th Century

AAS 333 - African American History: After the 19th Century

AAS 341 - Politics of Africa
AAS 346 - Comparative Third World Politics
AAS 353 - Sociology of the African American Experience
AAS 364 - African International Relations
AAS 365 - International Political Economy of the Third World

AAS 367 - Protest Movements \& African American Artists:19th \& 20th Centuries

AAS 380 - International Course or
AAS 480 - International Course or
AAS 580 - International Course
AAS 390 - Independent Study or
AAS 490 - Independent Study or
AAS 590 - Independent Study
AAS 402 - Slavery and Abolition
AAS 410 - Seminar on Social Change
AAS 416 - Race, Crime and Punishment
AAS 427 - New York City: Black Women Domestic Workers or

WGS 627 - New York City: Black Women Domestic Workers

AAS 434 - Underground Railroad
AAS 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism or

WGS 645 - The Caribbean: Sex Workers, Transnational Capital and Tourism
AAS 470 - Experience Credit Internship in African American Studies

AAS 500 - Selected Topics
AAS 501 - African American Sociological

Practice:1900-45
AAS 510 - Studies in African American History
AAS 525 - Research Methods in African American Studies

AAS 540 - Seminar:African American Studies

## Note:

*These courses may be counted toward the minor requirement only when the content of the course is within the subfield specialization.

## Anthropology Minor

John Burdick, Chair
209 Maxwell Hall
315-443-2200

## Faculty

Douglas V. Armstrong, Hans C. Buechler, John S. Burdick, A.H. Peter Castro, Christopher R. DeCorse, Azra Hromadzic, Shannon A. Novak, Deborah Pellow, Lars Rodseth, Robert A. Rubinstein, Maureen Trudelle Schwarz, Theresa A. Singleton, John Marshall Townsend, Cecilia Van Hollen, Susan S. Wadley

Anthropology explores the entire range of human experiences in the past and present. Our department offers undergraduate courses covering the breadth of the discipline, including physical anthropology (the study of human evolution and biological variation); archeology (the study of prehistoric and historic cultures through material remains); linguistics (the study of language - its structure, historic developments, and social aspects); cultural anthropology (the study of contemporary societies); and applied anthropology (the use of anthropological methods and theory to solve real-world problems).
Ongoing research by our faculty and graduate students covers a broad array of topics, from slave settlements in Jamaica to women and development in India; from religious movements in Brazil to sustainable agriculture in Nepal; from forestry in Kenya to the Underground Railroad in Syracuse. Current research sites span the globe, including South and East Asia, South and North America, West and East Africa, the Middle East, Europe, and the Caribbean.
Undergraduate training in anthropology is useful in many fields, including education, international business, law, journalism, cultural resources management and public service. For students interested in future graduate studies in anthropology, our program offers a solid ground in theory, methods, ethics and practical application.

Undergraduate students are encouraged to explore anthropology not only through course work, but with direct involvement in laboratory research and field work. Our department
has fully equipped archeology and physical anthropology laboratories, providing a variety of research opportunities. A well established archaeological field training program is offered each summer. Field experience in cultural anthropology is available through community internships, independent studies, and ongoing faculty research. We also recommend that students consider spending a semester or two in another country through the University's SU Abroad Program, as a way of enhancing their major with true cross-cultural experience. For information contact the Anthropology Department Undergraduate Director.

The minor in anthropology is designed to encourage students to pursue breadth in areas which complement their major. With the assistance of their faculty advisors, students can design a minor reflecting their interest in any of the subfields of anthropology: socio/cultural, biological/physical, archaeological, applied, and policy-related studies.
To complete the minor in anthropology, students take 18 credits. No more than 6 credits at the 100-200 level can count toward the minor.

## Possible Courses Leading to a Minor in Anthropology

Examples of possible courses leading to a minor in anthropology could include (but are in no way limited to) the following:

## Applied and Policy Related:

ANT 111 - Introduction to Cultural Anthropology
ANT 356 - Applied Anthropology
ANT 414 - Cities, Spaces and Power
ANT 417 - Economic Anthropology
ANT 445 - Public Policy and Archaeology

## Archaeology:

ANT 141 - Introduction to Archaeology and Prehistory
ANT 145 - Introduction to Historical Archaeology
ANT 348 - History of Archaeology
ANT 443 - Field Methods in Archaeology
ANT 445 - Public Policy and Archaeology
ANT 446 - Caribbean Archaeology

## Social/Cultural:

ANT 111 - Introduction to Cultural Anthropology
ANT 185 - Global Encounters:Comparing World
Views \& Values Cross-Culturally
ANT 325 - Anthropology of American Life in Film
ANT 373 - Magic and Religion

ANT 376 - Folklore
ANT 472 - Language, Culture, and Society

## Biological/Physical:

ANT 131 - Introduction to Biological Anthropology
ANT 433 - Human Osteology
ANT 434 - Anthropology of Death
ANT 436 - Bioarchaeology
ANT 465 - Critical Issues in Medical Anthropology

## Applied Statistics Minor

## Contact:

Pinyuen Chen, Advisor
215 Carnegie Library
315-443-1577
pinchen@syr.edu

## Faculty

Eddie Bevilacqua, Pinyuen Chen, Peng Gao, Susan H. Gensemer, Vernon L. Greene, Chihwa (Duke) Kao, Hyune-Ju Kim, Yingyi Ma, Jan Ivar Ondrich, Steve Stehman, Lianjun Zhang, Raja Velu, William Volterman, Janet Wilmoth, Larry L. Wolf, Yildiray Yildirim

To complete this minor, students take at least 18 credits from the distribution below. Courses are selected in consultation with a member of the Program Committee. With permission from the Program Committee, students receive credits toward the minor for other courses that have sufficient statistics content.

## Basic Statistics (3 credits)

APM 395 - Probability and Statistics for Engineering *

CIS 321 - Introduction to Probability and Statistics

ECN 521 - Economic Statistics
MAS 261 - Introductory Statistics for Management
MAT 122 - Probability and Statistics for the Liberal Arts II
MAT 221 - Elementary Probability and Statistics I
MAT 521 - Introduction to Probability
MFE 326 - Probability and Statistical Methods for Engineers

STT 101 - Introduction to Statistics
Regression Analysis (3 credits)
ECN 522 - Econometric Methods
MAS 466 - Data Mining for Managers

Additional Coursework (12 credits)

APM 510 - Statistical Analysis *
ECS 525 - Probability for Engineers
ECS 526 - Statistics for Engineers
GEO 386 - Quantitative Geographic Analysis
MAT 122 - Probability and Statistics for the Liberal Arts II
MAT 222 - Elementary Probability and Statistics II
MAT 525 - Mathematical Statistics
MAT 526 - Introduction to Stochastic Processes
MAS 362 - Decision Tools for Management
MAS 477 - Time Series Analysis and Forecasting
MAX 201 - Quantitative Methods for the Social Sciences
PSY 252 - Statistical Methods II
SOC 318 - Introduction to Research

## Note:

* Courses with an APM prefix are offered by the SUNY College of Environmental Science and Forestry.


## Arabic Minor

## Coordinator:

Rania Habib, Assistant Professor of Linguistics and Arabic, Coordinator of Arabic Program Dept. of Languages, Literatures, and Linguistics Syracuse University
325 H. B. Crouse
Syracuse, NY 13244
Tel: 315-443-5490
Fax: 315-443-5376

## Description:

Arabic is spoken by over 300 million speakers in 22 countries in the Middle East and North Africa. It is also an official language in 26 countries, the African Union, the Arab League, and the United Nations. It is the main medium of communication in business, government, and the media throughout the Arabic-speaking world. Currently, Arabic is designated as one of the critical languages by the federal government, which has been investing substantially in increasing the number of Americans with high proficiency in Arabic.

The increasing number of students enrolling in Arabic language, linguistics, and culture courses in Syracuse University in recent years and the high level of retention of those students in consecutive years demonstrate the great demand for the study

## UNDERGRADUATE COURSE CATALOG

of Arabic.
A minor in Arabic will prepare students to read, write, and communicate orally in Arabic at a functional level in an international setting, and to recognize and respond to cultural patterns of Arabic-speaking peoples. It will allow students majoring in other disciplines, e.g. Middle Eastern Studies, Political Science, Business, Journalism, International Relations, Public Relations, Translation, etc. to employ their knowledge of Arabic language and culture in their future careers. A minor in Arabic will increase students' attractiveness in the job market, especially with the present significant demand for Americans who can demonstrate high proficiency in Arabic.

## Admission:

Students should have completed the prerequisite ARB 102 or equivalent.

## Curriculum Requirements:

A Minor in Arabic requires a minimum of 20 credit hours including ARB 201 and ARB 202 and 12 credits at the 300 level or above. The courses in the table below are required. Previously approved upper-division Arabic language, literature, or culture courses through one of our Study Abroad centers can be considered as substitute to these courses, with prior approval by the Arabic coordinator. The courses ARB 201, ARB 202, ARB 301 and ARB 302 should be substituted with an equivalent level or higher. The ARB 336 (Arabic Cultures) course could be substituted with an upper-division Arabic language, literature, or culture course at the 300 level or above, provided that the language course is different from ARB 301 and ARB 302. The ARB 426 (Structure of Standard Arabic) course could be substituted with an equivalent course or an upper-division Arabic language, literature, or culture course at the 400 level or above.

ARB 201 - Arabic III (offered every fall semester)
ARB 202 - Arabic IV (offered every spring)
ARB 301 - Arabic V (offered every fall semester)
ARB 302 - Arabic VI (offered every spring semester)

LIN 426 - Structure of Standard Arabic * (offered once per year)
LIT 336 - Arabic Cultures ** (offered once per year)

## Total Credits Required: 2

## Note:

[^5]** To be counted towards the Arabic Minor at least two of the assigned assignments (the three critical essays and the short story) or just the final project must be completed in the Arabic language.

## Art History Minor

Theodore Philip Cateforis, Chair
308 Bowne Hall
315-443-4835
Romita Ray, Undergraduate Director
308 Bowne Hall
315-443-5030

## Faculty

Luis Castañeda, Sally Cornelison, Laurinda Dixon, Wayne Franits, Jeehee Hong, Richard Ingersoll, Matilde M. Mateo, Alick McLean, Jonathan Nelson, Gary M. Radke, Romita Ray, Sascha Scott
The Department of Art and Music Histories was one of the first in the country dedicated to the study of the history of art and music from an interdisciplinary perspective. The department offers courses in most major periods of the history of visual and musical arts from ancient to postmodern times. The research and teaching specialties of the art history faculty include, art and medicine in the early modern period, Northern and Italian Renaissance art, 17thcentury Dutch painting, Chinese, Japanese, and Korean art, , 19th- and 20th-century European art, South Asian art and architecture, American and Latin American art and architecture.

## Minor Requirements

The minor in art history requires 18 credits of coursework. These courses must be upper-level HOA courses ( 300 level and above) in art history, drawn from the departmental HOA offerings. Students may petition to have up to 6 credits of selected topics courses in art history (HOA 300 or HOA 400) count toward the minor. In addition, students may petition to have up to 6 credits of art history courses taken outside the department count toward the minor.

## Requirements

HOA 105 - Arts and Ideas I or
HOA 106 - Arts and Ideas II or
HOA 176 - The Visual Arts of the Americas
These courses are required prerequisites but do not count toward the minor.

## Asian/Asian American Studies Minor

## Contact:

Gerald Greenberg
441 Hall of Languages
ggreenbe@syr.edu
315-443-1414

## Faculty

Tej K. Bhatia, Carol Babiracki, Naomi Edwards, Susan Edmunds, Gareth J. Fisher, Ann Grodzins Gold, Jeehee Hong, George Kallander, Norman A. Kutcher, Meera Lee, Amy Lutz, Yingyi Ma, Devashish Mitra, Deborah Pellow, Romita Ray, Farhana Sultana, Susan S. Wadley, Joanne P. Waghorne

More than two thirds of the Asian American population is comprised of immigrants whose personal and migration histories, educational achievements and attitudes have been molded by their Asian heritages and who continue to maintain connections with their homelands. This program was developed out of an awareness that we cannot understand Asian Americans without understanding the histories and cultures of Asia and vice versa, that we cannot understand contemporary Asia without understanding how American politics, capital, religion, culture and Asian American diasporas have shaped countries in that continent.

The minor will consist of 18 credits, 12 of which must be in advanced 300 or higher level coursework.

18 credits, 12 at the 300 or higher level

## I. Required Courses (3 credits)

AAA 101 - Introduction to Asian/Asian-American Studies

## II. One of these courses focusing on migration, ethnicity and/or race relations

## (lower division)

ETS 184 - Ethnicity and Literary Texts
SOC 248 - Ethnic Inequalities and Intergroup Relations

## (upper division)

ANT 367 - Gender in a Globalizing World (relevant sections)

GEO 450 - Geographies of Migration and Mobility
*
PSC 369 - Global Migration
III. At least one course focused

## on Asian Americans

AAA 300 - Selected Topics Topics in Asian Diaspora: Trauma, Memory and History *

AAA 300 - Selected Topics Contemporary Asian American Literature and Films *

LIN 481 - Global Communication Through World Englishes
MES 315 - Arab American Literature and Culture (when offered on Asian Americans)

REL 487 - Global Hinduism
SAS 301 - Contemporary Asian Americans

## IV. At least one course focused on Asia

## (Iower division)

REL 165 - Discovering Islam
REL 185 - Hinduism
REL 186 - Buddhism
REL 283 - India's Religious Worlds

## (upper division)

ANT 324 - Modern South Asian Cultures
ECN 365 - The World Economy
ETS 350 - Topics in Reading Nation and Empire (relevant sections)

HOA 391 - Survey of Asian Art
HOM 384 - Music and Dance of India
HOM 482 - The Roots of Global Pop
GEO 374 - Environment and Development in the Global South

HST 320 - Traditional China
HST 329 - Making of Modern India
HST 388 - Vietnam: Movies, Memoirs and the Shaping of Public Memory

HST 393 - East Asia and the Socialist Experience
HST 394 - Partition of India in Film
HST 395 - Modern Japan
HST 397 - Modern Korea
PSC 335 - Politics of East Asia
REL 385 - Religion in Chinese Society
REL 465 - Beyond the Veil: Gender Politics in Islam
SAS 384 - Goddesses, Women and Power in Hinduism

TRF 560 - Topics in International Perspectives
WGS 439 - Women, Gender and Violence in a Transnational Context

V. Two courses from parts III or IV with one course in Asian language<br>(Chinese, Hindi/Urdu, Japanese, Korean)

## Note

* New courses not yet regularized


## Biology Minor

Undergraduate Programs Director<br>Scott E. Erdman<br>Room 110 Life Sciences Complex<br>seerdman@syr.edu, 315-443-3748

## Contact:

Deborah Herholtz, Undergraduate Programs Secretary
114 Life Sciences Complex
315-443-9139

## Faculty

David M. Althoff, John M. Belote, Carlos Casta Carlos Castañeda, eda, Samuel H.P. Chan, Heather Coleman, Steve Dorus, Scott E. Erdman, Thomas P. Fondy, Douglas A. Frank, Jason D. Fridley, Jannice Friedman, Anthony Garza, Paul Gold, Sarah Hall, James A. Hewett, Sandra J. Hewett, Donna Korol, Katharine Lewis, Jessica MacDonald, Eleanor Maine, Susan Parks, Melissa Pepling, Scott Pitnick, Ramesh Raina, Surabhi Raina, Mark Ritchie, Kari A. Segraves, Robert Silver, Melody Troeger Sweet, Joseph T. Tupper, Roy Welch, Jason R. Wiles

The minor in biology is an optional program of study that may be taken in addition to the recognized majors in the College. The minor may be appropriate for students wishing to augment majors such as psychology, engineering, chemistry, and illustration with a biological component.

## General Requirement

20 credits of coursework in biology, 12 credits of which must be at the 300 -level or above. Students with 8 AP credits for Introductory Biology must take a minimum of 15 credits of graded courses for the minor.

## Course Requirements

BIO 121 - General Biology I
BIO 123 - General Biology II

## BIO 124 - General Biology II Laboratory

## Additional Elective Courses

Additional 300- to 500-level elective courses to meet the 20 credits must be chosen to augment the interest of the student.

## Chemistry Minor

## Chair:

Jon Zubieta, 1-014 Center for Science and Technology, 315-443-4109, jazubiet@syr.edu

## Faculty

Philip N. Borer, Mark S. Braiman, Carlos Castañeda, Joseph Chaiken, Arindam Chakraborty, John D. Chisholm, Daniel Clark, James C. Dabrowiak, Robert P. Doyle, James Hougland, Bruce S. Hudson, Tara Kahan, James Kallmerten, Ivan V. Korendovych, Ttyimothy M. Korter, YanYeung Luk, Mathew M. Maye, Karin Ruhlandt, James T. Spencer, Michael B. Sponsler, Nancy I. Totah, Weiwei Zheng, Jon Zubieta

## Major in Chemistry

The minor in chemistry is offered to provide students with a basic understanding of the structure and behavior of matter at the atomic and molecular level. Increasingly, the control of matter at the level of individual molecules is becoming the key ingredient in sweeping technological advances such as genetic engineering, micro and molecular electronics, advanced materials, and anotechnology. A minor in chemistry offers a strong complement to major areas of study such as biology, physics, geology, psychology, engineering, pre-medicine, and preprofessional degree programs.

## General Requirements

To complete a minor in chemistry, students take 20 credits carrying a CHE or BCM prefix, including courses that meet requirements A and B below. No part of the minor requirements may be met with transfer or AP credits, nor with independent study (CHE 290, CHE 490), research (CHE 450, BCM 460), or experience credits (CHE 470).

## A. Lower-division

Lower-division courses must include either of the following groups:

CHE 106 - General Chemistry Lecture I or
CHE 109-General Chemistry Lecture I (Honors and Majors)

CHE 107 - General Chemistry Laboratory I or CHE 129 - General Chemistry Laboratory I
(Honors and Majors)
CHE 116 - General Chemistry Lecture II or
CHE 119 - General Chemistry Lecture II (Honors and Majors)

CHE 117 - General Chemistry Laboratory II or
CHE 139 - General Chemistry Laboratory II (Honors and Majors)
or
CHE 275 - Organic Chemistry I and
CHE 276-Organic Chemistry I Laboratory

## B. Upper-division

Upper-division courses must include 12 credits of CHE and BCM courses numbered above 299, including at least one lecture course from among the group CHE 325, CHE 346, CHE 411; and at least one course with an instructional laboratory component. Examples of courses that satisfy the instructional laboratory requirement, and that mesh well with other requirements of the minor, are:

CHE 326 - Organic Chemistry II Laboratory
CHE 335 - Chemical and Biochemical Analysis with Laboratory

CHE 347 - Physical-Analytical Chem Lab
CHE 422 - Inorganic Laboratory Technique
CHE 477 - Proteins and Nucleic Acids Lab

## Chinese Language Minor

## Contact:

Edwin Van Bibber-Orr
340 HBC
evanbibb@syr.edu

## Description:

Chinese is one of the most spoken and highly valued languages in the world. The goal of the Chinese minor is to increase students' proficiency in speaking, reading, writing, and understanding Mandarin Chinese. Students with intermediate, advanced, or higher-level proficiency in Mandarin will enhance their marketability and gain valuable skills to compete and contribute in today's world.

## Admission:

Admission to the Chinese minor is open to all undergraduates who have completed CHI 101 and 102 or the equivalent with the grade of B - or better.

Required Courses: 18 Credits
CHI 201 - Chinese III

CHI 202 - Chinese IV
CHI 301 - Chinese V
CHI 302 - Chinese VI
CHI 401 - Advanced Chinese III
CHI 402 - Advanced Chinese IV

## Note:

CHI 101 and CHI 102 do not count toward the Chinese Language Minor
One approved relevant course can be considered as a substitute for CHI 201 for students who enter the program at a higher level. A course taken through SU Abroad or other centers can also be considered as this one substitute (for 201) course, upon approval of Chinese minor advisor. A Chinese literature course taught in English or another language could substitute for CHI 201 only. Up to one course taught fully in Mandarin could substitute for other minor requirements upon approval by Chinese minor advisor on SU campus.

## Chinese Studies Minor

Gareth J. Fisher, Director
gfisher@syr.edu
505 Hall of Languages
315-443-5720

## Faculty

Gareth J. Fisher, Dimitar Gueorguiev, Jeehee Hong, George Kallander, Norman A. Kutcher, Yingyi Ma, Edwin I.S. Van Bibber-Orr

## Minor Requirements

The minor requires 19 credits; 12 credits must be at the 300 level or above. Study abroad in one of the SU centers - in Beijing or Hong Kong - is highly recommended.

## Core Requirements (10 credits)

One year of (Mandarin) Chinese language (the equivalent of CHI 101 and CHI 102) 8 credits

HUM 403 - China: Past, Present and Future (Beijing or Hong Kong) (or equivalent course in consultation with the Director of Chinese Studies)

## Critical Directions in Chinese <br> Studies ( 6 credits):

Two courses chosen from:
HOA 392 - The Arts of China
HOM 386 - Sounds of the Silk Road
HST 320 - Traditional China

HST 321 - Modern China
REL 385 - Religion in Chinese Society

## Other Requirements (3 credits)

One additional course with a China focus chosen from:

Offered in London through SU Abroad:

PSC 300 - Selected Topics China, Rise of a Superpower

Offered in Beijing through SU Abroad:
ANT 403 - Culture, Confucianism and Chinese Modernity
COM 400 - Selected Topics Chinese Media and Mass Communications

ECN 300 - Selected Topics China and the World Economy

GEO 300 - Selected Topics The Other China: Ethnic Minorities, Development \& the Environment or

IRP 300 - The Other China: Ethnic Minorities, Development \& the Environment or
PSC 300 - Selected Topics The Other China: Ethnic Minorities, Development \& the Environment

HST 300 - Selected Topics The Changing Faces of China or

FLL 300 - The Changing Faces of China
GEO 300 - Selected Topics Exploring Beijing: The Historical Geography of the Chinese Capital or

HST 300 - Selected Topics Exploring Beijing: The Historical Geography of the Chinese Capital

HST 413 - China Encounters the West: Qing Dynasty to Early Republic

IRP 431 - Environment and Development in China
PAI 515 - China in Transition or
PSC 431 - China in Transition
Offered in Hong Kong through SU Abroad:

BUA 400 - Selected Topics Culture, Business, and Political Economies of East Asia or

HST 400 - Selected Topics Culture, Business, and Political Economies of East Asia or
PSC 400 - Selected Topics Culture, Business, and Political Economies of East Asia

ECN 363 - Economic Development of China
LIT 300 - Selected Topics Topics in Asian Cinema
PSC 442 - Democratization in East Asia

PSC 425 - Hong Kong in the World Political Economy

REL 387 - Religious Belief Systems in Everyday Asian Life

## May Replace One Course with a China Focus

One (only) of these courses (listed below) may replace one course with a China focus (listed above):
PSC 346 - Comparative Third World Politics (when China is the focus)

BUA 400 - Selected Topics Culture, Business, and Political Economies of East Asia (Hong Kong only) or

HST 400 - Selected Topics Culture, Business, and Political Economies of East Asia (Hong Kong only) or

PSC 400 - Selected Topics Culture, Business, and Political Economies of East Asia (Hong Kong only)
HOA 391 - Survey of Asian Art
HST 401 - Senior Seminar (SU Main campus only)
LIT 382 - Asian Cinema (Hong Kong only)
PSC 442 - Democratization in East Asia (Hong Kong only)
Selected topics courses may be petitioned to count toward the minor.

## Classical Civilization Minor

## Coordinator:

Jeffrey S. Carnes, Associate Professor
340 Huntington Beard Crouse Hall
315-443-2068
jscarnes@syr.edu

## Faculty

Jeffrey S. Carnes, Matthieu H. van der Meer
Why Study Classics?
The past is a foreign country; they do things differently there.

## L.P. Hartley

Students approaching Classical Studies for the first time may wonder how the study of languages and cultures from antiquity is relevant in the digital era; why study Classics?

First, Classics provides students with many fascinating intellectual opportunities. Because the range of Greek and Latin literature is so diverse, students interested in history, drama, poetry, political science, or philosophy, will find ample material to stimulate their curiosity. Moreover,
students will develop the ability to read some of the most influential works of western literature in their original languages, and learn about cultures that are radically different from our own, yet at the same time provide the foundation of many modern ideas and institutions.

Since Classical Studies have traditionally played a central role in education they have left an indelible mark on the intellectual, political, and artistic development of Western Civilization. Countless authors, as diverse in time and place as Dante and Derek Walcott, have looked for inspiration to the classical tradition; political theorists and statesmen, including Thomas Jefferson and Alexander Hamilton, developed their political ideals through a close reading of ancient historians such as Polybius and Thucydides. Understanding the reception of classical texts and the ways subsequent generations adapted and modified classical ideals will grant students a greater degree of proficiency in civic and cultural history, and help them better understand the cultural politics of their own world.

While not all Classics students wish to become classical scholars, a major in Classics is among the most impressive degrees to have when applying for a job in other fields. The work ethic required for success in the languages, the intellectually challenging nature of the grammar and syntax of Greek and Latin, and the interdisciplinary nature of the field are only a few reasons why Classics majors are highly respected and sought-after job candidates. Furthermore, because of the historical role of Classics in education many terms and concepts in various fields are derived from Greek or Latin. For these reasons, Classics majors often find employment in Law, Medical Sciences, Government/Politics, Writing and Journalism, and Education.

Why study Classics? To find a challenging and immensely rewarding field of study, and to explore the familiar yet foreign country that is our past.

## Admission

Undergraduate students at Syracuse University in a college that awards minors in Arts and Sciences subject areas.

## Curriculum Requirements

The Minor in Classical Civilization requires 18 credits chosen from the following list of courses. At least 12 credits must come from courses numbered 300 and above; in addition, at least two courses must come from among the courses taught within the Classics program (those with the prefixes LAT, GRE, and LIT). Other courses related to the ancient world may be substituted with the approval of the program director.

Greek

GRE 101 - Ancient Greek I
GRE 102 - Ancient Greek II
GRE 201 - Ancient Greek III
GRE 310 - Greek Prose Authors
GRE 320 - Readings from Greek Poets
GRE 410 - Advanced Greek Prose
GRE 420 - Advanced Greek Poetry
Latin
LAT 101 - Latin I
LAT 102 - Latin II
LAT 201 - Latin III
LAT 310 - Latin Prose Authors
LAT 320 - Latin Poets
LAT 410 - Advanced Latin Prose
LAT 420 - Advanced Latin Poetry

## Lit (Literature in Translation)

LIT 101 - Introduction to Classical Literature (Greek)

LIT 102 - Introduction to Classical Literature (Latin)
LIT 203 - Greek and Roman Epic in English Translation
LIT 211 - Greek and Roman Drama in English Translation

LIT 300.2 A Greek Odyssey (offered in Florence)
LIT 421 - Classical Mythology

## Anthropology

ANT 141 - Introduction to Archaeology and Prehistory

ANT 145 - Introduction to Historical Archaeology
ANT 346 - Gender Through the Ages
ANT 348 - History of Archaeology

## History

HST 210 - The Ancient World
HST 310 - The Early Middle Ages
HST 352 - History of Ancient Greece
HST 353 - History of Ancient Rome
HST 401 - Senior Seminar Roman Imperialism
HST 401 - Senior Seminar Herodotus and the
Persian Wars

## History of Art

HOA 105 - Arts and Ideas I
HOA 301 - Origins of Western Art
HOA 302 - Greek Art and Architecture

HOA 303 - Etruscans and Romans: Ancient Art and Society in Italy

HOA 304 - Roman Art \& Architecture

## Linguistics

LIN 201 - The Nature and Study of Language
LIN 202 - Languages of the World

## Philosophy

PHI 111 - Plato's Republic
PHI 307 - Ancient Philosophy
PHI 415 - Roots of Western Civilization

## Religion

REL 205 - Ancient Greek Religion
REL 206 - Greco-Roman Religion
REL 217 - The New Testament
REL 294 - Mythologies
REL 309 - Early Christianities
REL 421 - Classical Mythology (offered in Florence)

## Total Credits: 18

Classics Minor

## Contact:

Jeffrey S. Carnes
332 H.B. Crouse
315-443-2068
jscarnes@syr.edu

## Faculty

Jeffrey S. Carnes, Matthieu H. van der Meer
Why Study Classics?
The past is a foreign country; they do things differently there.

## L.P. Hartley

Students approaching Classical Studies for the first time may wonder how the study of languages and cultures from antiquity is relevant in the digital era; why study Classics?
First, Classics provides students with many fascinating intellectual opportunities. Because the range of Greek and Latin literature is so diverse, students interested in history, drama, poetry, political science, or philosophy, will find ample material to stimulate their curiosity. Moreover, students will develop the ability to read some of the most influential works of western literature in their original languages, and learn about cultures that are radically different from our own, yet at
the same time provide the foundation of many modern ideas and institutions.

Since Classical Studies have traditionally played a central role in education they have left an indelible mark on the intellectual, political, and artistic development of Western Civilization. Countless authors, as diverse in time and place as Dante and Derek Walcott, have looked for inspiration to the classical tradition; political theorists and statesmen, including Thomas Jefferson and Alexander Hamilton, developed their political ideals through a close reading of ancient historians such as Polybius and Thucydides. Understanding the reception of classical texts and the ways subsequent generations adapted and modified classical ideals will grant students a greater degree of proficiency in civic and cultural history, and help them better understand the cultural politics of their own world.

While not all Classics students wish to become classical scholars, a major in Classics is among the most impressive degrees to have when applying for a job in other fields. The work ethic required for success in the languages, the intellectually challenging nature of the grammar and syntax of Greek and Latin, and the interdisciplinary nature of the field are only a few reasons why Classics majors are highly respected and sought-after job candidates. Furthermore, because of the historical role of Classics in education many terms and concepts in various fields are derived from Greek or Latin. For these reasons, Classics majors often find employment in Law, Medical Sciences, Government/Politics, Writing and Journalism, and Education.

Why study Classics? To find a challenging and immensely rewarding field of study, and to explore the familiar yet foreign country that is our past.

## Minor in Classics

A minor in Classics consists of 18 credits in GRE and LAT courses, with at least 9 credits coming from upper-division courses. Courses from the approved list for Classical Civilization may be substituted up to a total of 3 credits with the approval of the Director.

## Cognitive Science Minor

Robert Van Gulick, Director
522 Hall of Languages
315-443-5828
rnvangul@syr.edu
The minor in cognitive science offers study in recent interdisciplinary research on cognition. Relevant courses are offered in several departments and colleges, including College of Engineering and Computer Science and the linguistics, philosophy, and psychology departments within the College of Arts and Sciences. Students may pursue study in cognition
science either by enrolling in the interdisciplinary minor or by majoring in selected studies in cognitive science (see selected studies). Faculty advisors are available within each of these units to help students plan a course of study.

## Requirements

The minor requires 18 credits, according to the following distribution:

Students take the core course COG 301 Introduction to Cognitive Science. In addition, students take at least four courses, chosen from at least three of the four areas below:

## Cognitive Processes

PSY 322 - Cognitive Psychology
PSY 426 - Cognitive Neurochemistry
PSY 437 - Cognition and Aging

## Conceptual Foundations

CIS 467 - Introduction to Artificial Intelligence
PHI 377 - Philosophy of Psychology
PHI 378 - Minds and Machines
PHI 487 - History of Epistemology

## Formal Systems

CIS 473 - Automata and Computability
PHI 551 - Mathematical Logic
CIS 565 - Introduction to Artificial Neural Networks

## Linguistics

CIS 668 - Natural Language Processing
LIN 301 - Introductory Linguistic Analysis
LIN 431 - Phonological Analysis
LIN 441 - Syntactic Analysis

## Additional Information

To complete the minor in cognitive science students take an additional cognitive science course, either a fifth course chosen from those listed above or, with the advisor's approval, a credit bearing independent study course (COG 490).

Communication Sciences and Disorders Minor

## Chair:

Karen A. Doherty

## Contact:

Phone: 315-443-9637
Email: csd@syr.edu
The minor is designed for the undergraduate student who wishes to explore the field of communication sciences and disorders, to investigate an area of academic substance, and to become familiar with a field that offers opportunities in both applied and basic research and clinical practice.

## Admission:

CSD212 must be completed with a grade of B or better in order to declare the minor.

## Curriculum Requirements

CSD 212 - Introduction to Communication Sciences and Disorders

## At least three courses selected from the following group: <br> CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms

CSD 316 - Introduction to Applied Phonetics
CSD 325 - Fundamentals of Hearing Sciences
CSD 345 - Speech Science
CSD 409-Cognitive Neuroscience of Speech and Language
CSD 422 - Development of Speech and Language
And two additional courses chosen from the prior group or from the following:
CSD 427 - Articulation Disorders
CSD 425 - Stuttering
CSD 429 - Basic Clinical Audiology
CSD 435 - Aural Rehabilitation

## Total Credits Required

The minor consists of 18 credits.
The minor is open to all students who earn a B or better in CSD 212

## Earth Sciences Minor

Donald Siegel, Chair
204 Heroy Geology Laboratory
315-443-2672
The Earth Sciences provide insights into some of humanity's deepest questions. How was the
planet Earth, our lifeboat in space, formed? What are the processes that have shaped the Earth its surface and internal structure? How has life, of which humanity is a part, evolved? Why are there earthquakes, volcanoes, mountain chains, continents, and oceans? How has the surface of the Earth changed through time? On a practical level, the study of Earth Sciences provides a basis for understanding natural hazards, assessing Earth's climate variability, predicting the migration of man-made pollutants, and exploring for the energy and mineral resources upon which society depends. The study of earth sciences also, uniquely, provides a perspective of time and an appreciation of the natural world that can enrich a lifetime.

## Minor in Earth Sciences

To complete a minor in Earth Sciences, students must take 18 credits in Earth sciences which includes an introductory course (EAR 105 or EAR 110 or EAR 203), and 12 credits of courses numbered 300 or above.

## Economics Minor

William Horrace, Chair
110 Eggers Hall
315-443-3612

## Faculty

Elizabeth Ashby, Badi Baltagi, Kristina Buzard, Donald H. Dutkowsky, Gary V. Engelhardt, Jerry Evensky, William Horrace, Chihwa (Duke) Kao, Leyla Karakas, Jerry S. Kelly, Jeffrey D. Kubik, Derek Laing, Yoonseok Lee, Chung-Chin (Eugene) Liu, Mary E. Lovely, Robin P. Malloy, Devashish Mitra, Piyusha Mutreja, Inge O'Connor, Jan Ivar Ondrich, John L. Palmer, J. David Richardson, Stuart S. Rosenthal, Abdulaziz Shifa, Perry Singleton, A. Dale Tussing, Michael Wasylenko, Peter J. Wilcoxen, John M. Yinger

Economists analyze the internal functioning of markets and market outcomes. While modern economics focuses on market forces, markets function imperfectly in some cases and that introduces scope for policy action. Our curriculum emphasizes the application of economics to the study of public policy issues and the role of government in a market economy. Examples include analysis of international trade and relations, economic behavior in the workplace, health care, taxation, and numerous other spheres of a global economy. Students who major in economics prepare themselves for a variety of careers. Some move on to graduate study in economics and become professional economists; the majority, however, pursue careers in law, public policy, government, and many aspects of business, including banking and financial analysis, management, and marketing. Consequently,
some students choose to pursue double majors and dual degrees. Further information on these programs is available in the Academic Rules and Regulations section of this catalog or in the economics department office.

## Minor in Economics

To pursue a minor in economics, a student must petition the Economics Department and complete the following requirements:

## 1.3-6 credits of Principles of Economics

ECN 203 - Economic Ideas and Issues or equivalent

## 2. 15 credits of upper-division

 economics courses, including:ECN 301 - Intermediate Microeconomics or
ECN 311 - Intermediate Mathematical
Microeconomics
ECN 302 - Intermediate Macroeconomics

## Three Other Upper-division Electives in Economics

(ECN 300 or higher except ECN 301,ECN 302 , ECN 311, ECN 470, ECN 495, ECN 496, or ECN 499)

## Additional Information

In all, 18 to 21 credits of economics courses are required for the economics minor (depending on whether 3 or 6 credits of principles are taken). A minimum grade point average of 2.0 is required of all courses counted toward the minor in economics. School of Management majors who minor in economics may substitute FIN 355 for ECN 481. Credit cannot be granted, however, for both ECN 481 and FIN 355. In addition, economics minors will not receive credit for both ECN 365 and ECN 465.

Credit will not be given for both ECN 422 and ECN 521
All credits for the minor must be Syracuse University letter-graded coursework, except transfer credit. Only 3 credits can be transfer credit towards the economics minor and requires approval by petition.

## English and Textual Studies Minor

TBA , Director of Undergraduate Studies
401 Hall of Languages
315-443-2173

## Faculty

Crystal Bartolovich, Dorri Beam, Michael Burkard, Dympna Callaghan, Jonathan Dee, Susan Edmunds, Carol Fadda-Conrey, Arthur Flowers, Chris Forster, Ken Frieden, Mike Goode, Roger Hallas, Chris Hanson, Brooks Haxton, Mary Karr, Christopher Kennedy, Claudia Klaver, Erin S. Mackie, Patricia Moody, Kevin Morrison, Donald E. Morton, Patricia Roylance, George Saunders, Will Scheibel, Stephanie Shirilan, Bruce Smith, Dana Spiotta, Harvey Teres, Silvio Torres-Saillant

The Department of English offers programs in textual and cultural studies, with special emphasis on literary history, criticism, and theory. Courses deal with such problems as the nature and implications of reading and interpretation, the production of meaning in language and culture, and the nature of literary forms. The curriculum also includes courses in creative writing.

## Minor in English and Textual Studies

The ETS minor requires 18 credit hours of coursework (generally, six courses). Six credit hours (two courses) must be in courses at the 100 or 200 level (lower division) and twelve credits (four courses) must be in courses numbered 300 or above (upper division). The department recommends that one of the lower division courses be ETS 242 - Reading and Interpretation. Students may include among their upper division courses either one approved course offered by the Writing Program (WRT) numbered 300 or above, or one approved Literature in Translation course (LIT) numbered 300 or above.

Please note that Advanced Placement credits do NOT count toward the lower division credit requirements for an ETS minor.

## Declaring a minor

To declare an ETS minor, students should complete the Declaration of Minor form (http:// syr.edu/registrar/forms/Declaration_of_Minor. pdf) and then bring the form to the English Undergraduate Office (401 Hall of Languages) for the signature of the Undergraduate Coordinator. A copy of the form must be filed with the student's home college.

## Environment and Society Minor

Jane Read, Coordinator Department of Geography
437 Crouse-Hinds Hall
315-443-4279
The Environment and Society (E\&S) minor examines the social dimensions of environmental issues and sustainability. Through a range of interdisciplinary course offerings, it seeks to foster
environmental literacy and citizenship among students. Those completing the minor will gain a deep understanding of the political, cultural, and economic factors that affect our use of the environment. Courses in the minor draw primarily from the social sciences and humanities and ask a variety of questions. Who determines how the environment is used? How has the way we value nature and wildlife changed over time? How do social divisions influence who is affected by climate change, pollution, or natural disasters? How can we create a more sustainable society?

The Environment and Society minor is an excellent accompaniment to majors in other fields. For those interested in the natural sciences, the minor offers perspectives on the social dimensions of nature less emphasized in science courses. For those interested in public policy and economics, it allows students to delve more deeply into environmental matters. For those interested in business, finance, or management, the minor offers an opportunity to learn more about the relationships between environment, economy, and society. Finally, for those seeking a future in the media, it enables students to learn more about the environmental issues they will report on during their career. In short, the $\mathrm{E} \& S$ minor is a program for those who care about nature and want to find solutions to environmental problems. It is also a way for students to document their knowledge and expertise in environmental issues for the growing number of 'green' jobs and industries.

## Minor Requirements

The program leading to a minor in Environment and Society requires the completion of six courses ( 18 credits), two of which are mandatory and four of which are electives. Of the four elective courses for the minor, two must be in departments outside Geography. Students should work closely with their major advisor and the E\&S minor coordinator to ensure they are meeting the necessary requirements for both programs.

## Minors must take the following TWO lower-division courses:

GEO 103 - Environment and Society
GEO 155 - The Natural Environment or
GEO 215 - Global Environmental Change

## Minors must take FOUR of the following courses

Minors must take FOUR of the following courses, at least two of which must be from departments outside Geography. Please note that many courses offered through SU Abroad may also count toward the minor and that this list is subject to change as new relevant courses are created:

BIO 415 - Conservation Biology
CIE 274 - Sustainability in Civil and Environmental Systems

CIE 341 - Introduction to Environmental Engineering

ECN 437 - Environmental and Resource Economics

ECS 354 - Green Technology and Sustainability
EDU 300 - Selected Topics 601 Tully Project
FST 303 - Food Movements
FST 304 - Farm to Fork
FST 307 - Feeding the World: Global Agri-Food Governance

FST 402 - Feeding the City: Urban Food Systems
GEO 300 - Selected Topics Geographies of Sustainability

GEO 314 - Hazardous Geographic Environments
GEO 316 - River Environments
GEO 317 - Geography of Mountain Environments
GEO 318 - Tropical Environments
GEO 319 - Cold Environments
GEO 326 - The Geography of Climate and Weather
GEO 327 - Geography of Coastal Environments
GEO 340 - Geography of Oil
GEO 347 - Art and Environment in American
Culture Since 1800
GEO 353 - Geographies of Environmental Justice
GEO 354 - American Environmental History and Geography
GEO 356 - Environmental Ideas and Policy
GEO 358 - Animals and Society
GEO 360 - Sustainability Science and Policy
GEO 374 - Environment and Development in the Global South

GEO 400 - Selected Topics Geographies of Water
GEO 415 - Food: A Critical Geography
GEO 430 - Energy, History and Society
GEO 482 - Environmental Remote Sensing
GEO 455 - Biogeography
GEO 583 - Environmental Geographical Information Science

HNR 350 - Topics in the Natural Sciences and Mathematics Honors Water for Gotham
HTW 303 - Community and Environmental Health
NSD 555 - Food, Culture and Environment
PAF 451 - Environmental Policy
PHI 394 - Environmental Ethics

PSC 302 - Environmental Politics and Policy PSC 318 - Technology, Politics, and Environment
REL 395 - Religions and the Natural Environment
SOC 400 - Selected Topics Environmental Sociology

## Fine Arts Minor

Theodore Philip Cateforis, Chair
308 Bowne Hall
315-443-4835
Romita Ray, Undergraduate Director for Art History Suite 308 Bowne Hall
315-443-5030
Amanda Eubanks Winkler, Undergraduate Director for Music History \& Cultures
Suite 308 Bowne Hall
315-443-4835

## Faculty

Carol Babiracki, Molly Bourne, Luis Castañeda, Theo Cateforis, Sally Cornelison, Laurinda Dixon, Rodney Foster, Wayne Franits, Jeehee Hong, Sydney Hutchinson, Richard Ingersoll, Bette Kahler, Matilde M. Mateo, Alick McLean, Stephen Meyer, Jonathan Nelson, Romita Ray, Sascha Scott, Amanda Winkler

## The Minor in Fine Arts Requires 18 credits of coursework

12 of these credits must be earned in upperlevel HOA or HOM courses ( 300 level and above) drawn from any combination of the department's constitutive disciplines (art history, music history, and history of architecture). Up to 6 credits of coursework may be earned in 200 -level HOA or HOM courses. Students may also petition to have up to 6 credits of appropriate courses in these disciplines taken outside the department count toward the minor.

## Forensic Science Minor

Forensic Science
Michael Sponsler
forensics@syr.edu
315-443-0326
Syracuse University's curricular programs in forensic science, supported by the Forensic and National Security Sciences Institute in the College of Arts and Sciences, apply broad interdisciplinary scientific research and theory to real-world legal and security issues. Students can pursue an M.S. in Forensic Science, a combined M.S. in Forensic Science and J.D. in Law, an M.S. in Biomedical Forensic Sciences, a Certificate of Advanced Study in Medicolegal Death Investigation, an undergraduate Integrated Learning Major in Forensic Science, a Minor in Forensic Science, or
a Certificate in Medicolegal Death Investigation.

## Minor in Forensic Science

The minor in forensic science provides students with an understanding of the fundamental concepts and principles behind the application of scientific techniques to forensic investigations and to the criminal justice system. Recent advances in basic scientific research have had a rapid and dramatic impact in these fields and it is only through an understanding of these fundamental scientific concepts that the legal system may be effective in criminal investigations. A minor in forensic science offers a strong complement for students interested in criminal justice to major areas of study such as anthropology, biology, chemistry, physics, geology, psychology, engineering, pre-medicine, sociology, and pre-professional degree programs. The minor in forensic science is open to all students at Syracuse University.

## Requirements

## The minor in forensic science requires 18 credits that include:

CHE 113 - Forensic Science
FSC 406 - Advanced Forensic Science

## One course from among the following:

FSC 431 - Statistics for Forensic Science
FSC 444 - Forensic Chemical Analysis **
MAT 221 - Elementary Probability and Statistics I PSY 252 - Statistical Methods II

## And Selection of 3 Courses from Among the Following

(any FSC course may be used even if not listed):
ANT 433 - Human Osteology
ANT 436 - Bioarchaeology
ANT 434 - Anthropology of Death
BIO 326 - Genetics
BIO 462 - Molecular Genetics
CHE 335 - Chemical and Biochemical Analysis with Laboratory
CHE 575-Organic Spectroscopy
FSC - 300 Introduction to Forensic Anthropology
FSC 435 - Medicolegal Death Investigation I
FSC 440 - Special Topics in Advanced Forensics * FSC 444 - Forensic Chemical Analysis **

FSC 451 - Forensic Pathology

FSC 452 - Forensic Mental Health
FSC 453 - Forensic Toxicology
FSC 457 - Principles of Human Toxicology
FSC 461 - Firearms and Impression Evidence
FSC 462 - Forensic Entomology
FSC 463 - Bloodstain Pattern Analysis
FSC 465 - Latent Prints
FSC 467 - Forensic Photography
FSC 468 - Crime Scene Investigation
FSC 490 - Independent Study
NUC 520 - Radiochemistry, Nuclear Fuel
Reprocessing and Nonproliferation
PSY 474 - Forensic Psychology
SOC 334 - Criminal Justice
SOC 397 - Criminology

## Note:

*FSC 440 can be taken multiple times with different topics
** FSC 444 cannot count for both requirements

## French and Francophone Studies Minor

## Contact:

Hope Glidden (315) 443-2175 340 HB Crouse

## Faculty

Hope Glidden, Jean Jonassaint, Amy S. Wyngaard

## Minor in French

A minor in French and Francophone Studies consists of a minimum of 19 credits including FRE 202 and 15 upper-division credits in FRE courses. At least 6 credits of 300 -level FRE courses must be taken before entering any 400 -level FRE course. At least 6 credits of 400 -level FRE courses are required for the minor.

## Geography Minor

Jane Read, Director of Undergraduate Studies 437 Crouse-Hinds Hall
315-443-4279
Geographers are concerned with social, spatial, and environmental processes in human and natural systems. Their work focuses on critical theory, practical application, analysis, and interventions. Of central importance to the study of geography are relations between diverse social groups, as well as between people and their natural and human-built environments. Coursework for a Geography minor spans the social and natural sciences and includes
cartography, geographic information systems (GIS), and other technologies for analyzing spatial information. Many geography students combine majors and minors in other fields to prepare themselves for careers in environmental analysis and resource management, urban and regional development, international relations, conflict resolution, public service, and more.

## Minor in Geography

To complete a minor in geography, students must complete 18 credits in geography courses, of which a minimum of 12 credits must be upper division (i.e. 300-level or above).

## German Minor

Karina Von Tippelskirch
340 H.B. Crouse
315-443-2175
Kvontipp@syr.edu

## Minor in German

The German Minor requires at least 18 credits beginning on the GER 201 level; at least 12 of the credits have to be taken on the 300 level and above.

## Global Political Economy Minor

Terrell Anne Northrup, Coordinator
Minor Coordinator
225 Eggers Hall
315-443-2306
northrup@syr.edu
The minor in Global Political Economy (GPE) is an interdisciplinary program in the social sciences designed to help students explore all the dimensions and implications of globalization in contemporary international relations. The minor is administered by the International Relations Program and is open to all Syracuse University undergraduate students in good academic standing. International relations majors whose topic concentration is international political economy (IPE) are not eligible to take the Global Political Economy minor.

## Requirements

The GPE minor consists of six (6) courses, eighteen (18) credits. These include two required introductory-level courses, PSC 124 - International Relations and GEO 273 - World Political Economy, plus 12 credits in courses numbered 300 or above, which must include one course in Economics, one in Political Science, and two approved social science GPE electives. For the four upper division courses, students may take a maximum of two political science and two economics courses. Advanced undergraduate courses (300-level or higher) designated in the

International Political Economy (IPE) topic area of International Relations that are global (not national or regional) in scope may be accepted toward completion of the minor upon approval by the GPE Minor Coordinator in the International Relations Program. You may check the list of approved courses offered each semester at http://www.maxwell.syr.edu/IR_Global_Political_ Economy/

ANT 357 - Health, Healing, and Culture
ECN 365 - The World Economy
ECN 465 - International Trade Theory and Policy
GEO 340-Geography of Oil
GEO 367 - Gender in a Globalizing World
GEO 374 - Environment and Development in the Global South

GEO 415 - Food: A Critical Geography
GEO 440 - Race and Space
IRP 404 - Global Political Economy Issue
PSC 351 - Political Economy of Development
PSC 355 - International Political Economy
PSC 365 - International Political Economy of the Third World

PSC 369 - Global Migration
SOC 415 - Global Cities
SOC 434 - Globalization and Social Change

## Global Security Studies Minor

Terrie Northrup, Minor Coordinator
225 Eggers Hall
315-443-2306
northrup@syr.edu
The minor in Global Security Studies (GSS) is an interdisciplinary program designed to help students explore the global, international, national, and human dimensions of security, conflict, and conflict resolution in contemporary international relations using the analytic tools provided in different social science disciplines. The minor is administered by the International Relations Program and is open to all Syracuse University undergraduate students in good academic standing. International relations majors whose topic concentration is international security and diplomacy (ISD) are not eligible to take the Global Security Studies minor. In addition, for students majoring in International Relations who wish to undertake the Global Security Studies minor, a maximum of three (3) lower division (below 300 level) credits may be shared between the major and the minor, and a maximum of six (6) upper-division ( 300 level or higher) credits may be shared between the major and the minor.

## Minor Requirements

The Global Security minor consists of six (6) courses, eighteen (18) credits. These include two required introductory-level courses, either PSC 124 - International Relations or HST 122 - Global History 1750 to Present to contextualize state security issues, and ANT 185 - Global Encounters:Comparing World Views \& Values Cross-Culturally or GEO 171 Human Geographies to highlight human and environmental security issues. The minor then requires 12 credits in courses numbered 300 or above, which must include one 400-level course. To maintain a balanced focus on the different dimensions of security, these upper division courses must include two (2) courses from List A, which focus on traditional issues of state security and two (2) courses from List B, which focus on human and environmental securities. You may check the lists of approved A \& B courses offered each semester at http://www.maxwell.syr.edu/ IR_Global_Security_Studies/

## List A:

ANT 358 - Peace, War and Security
GEO 372 - Political Geography
HST 337 - America in the World: The History of U.S. Foreign Relations, 1898- Present

IRP 401 - Global Policy Seminar
IRP 402 - Global Policy Seminar II
IRP 403 - Global Issues
IRP 412 - Global Governance: The United Nations System

PSC 357 - U.S. Foreign Policy
PSC 364 - African International Relations
PSC 367 - Oil, Water and War
PSC 368 - Islam and the West

## List B:

ANT 358 - Peace, War and Security
ANT 463 - Global Health
ECN 437 - Environmental and Resource Economics

GEO 340 - Geography of Oil
GEO 372 - Political Geography
GEO 374 - Environment and Development in the Global South

GEO 415 - Food: A Critical Geography
PSC 387 - Ethnic Conflict
SOC 354 - Gender, Militarism, and War
SOC 362 - Religion, Identity and Powe

Other advanced undergraduate courses (300-level or higher) in the social sciences that are not listed in the course catalog may be accepted toward completion of the minor upon approval by the International Relations Program. These courses will be listed on the Global Security Studies minor webpage at http://www.maxwell.syr.edu/ IR_Global_Security_Studies/

## History Minor

## Contact:

The History Department Office
145 Eggers Hall
315-443-2210 or 9926
e-history@maxwell.syr.edu

## Faculty

Alan Allport, Susan Branson, Craige B. Champion, Andrew W. Cohen, Albrecht Diem, Michael R. Ebner, Carol Faulkner, Jeffrey Gonda, Paul M. Hagenloh, Samantha Kahn Herrick, Amy Kallander, George Kallander, Osamah F. Khalil, Radha Kumar, Norman A. Kutcher, Chris Kyle, Elisabeth D. LaschQuinn, Laurie Marhoefer, Gladys McCormick, Dennis Romano, Mark G. Schmeller, Martin S. Shanguhyia, Junko Takeda, Margaret Susan Thompson
Understanding history-the record of what people have thought, said, and done-is essential in understanding the world of today. Students explore not only events of the past, but also how they were shaped by such factors as religion, economics, and geography and how these factors influence our own lives. The curriculum, which leads to a B.A. in history, also provides rigorous training in research, analysis, and writing.

## Minor in History

To complete a minor in history, students take 18 credits of history, including: 6 credits in lowerdivision and 6 credits in upper-division courses (300 or higher), all in a single general area of history (American, European, or Global). Minors must also take one additional subject area upperdivision course and HST 401.

## History of Architecture Minor

Theo Cateforis, Chair
308 Bowne Hall
315-443-4184
Matilde Mateo, Advisor
Department of Art and Music Histories
Suite 308 Bowne Hall
315-443-5035

## Faculty

Jean-François Bédard, Luis Castaneda, Lawrence Chua, Susan Henderson, Matilde M. Mateo, Romita Ray

## Requirements

The Minor in Architectural History requires 18 credits of coursework. These courses must be upper-level (300 level and above), of which 15 need to be from the list below. Of these 15 credits, 6 must be HOA courses taken at the Department of Art \& Music Histories, and 9 must be ARC courses, taken at the School of Architecture. The remaining 3 credits may be taken from the list below or from any HOA upper-level courses. Students may petition to have up to 6 credits of selected topics courses in architectural history (ARC or HOA) count toward the minor.

## Pre-Requisite:

HOA 105 - Arts and Ideas I and
HOA 106 - Arts and Ideas II
or
ARC 133 - Introduction to the History of Architecture I and

ARC 134 - Introduction to the History of Architecture II
(their credits do not count toward the minor)

## History of Architecture

The following courses offered by the School of Architecture (ARC) and the Department of Art \& Music Histories (HOA) count as courses on the History of Architecture:

## Primarily HOA courses

HOA 304 - Roman Art \& Architecture
HOA 396 - Art and Architecture of India
HOA 405 - The Mediterranean City: Architecture, Ritual and Power
HOA 410 - Art and Ideology in Medieval Spain
HOA 412 - The Gothic Spell
HOA 520 - Italian Urbanism: 100 Cities

## Primarily ARC courses

ARC 332 - Sixteenth Century Italian Architecture
ARC 334 - The Architecture of Revolutions European Architecture from the Scientific to the Industrial Revolution

ARC 335 - Early Renaissance Architecture in Italy 1400-1529

ARC 336 - Italian Seventeenth Century Architecture

ARC 337 - American Architecture, Settlement to 1860

ARC 338 - American Architecture, 1860 - World War I

ARC 431 - Early Modern Architecture
ARC 432 - The City in Architectural History
ARC 433 - French Architecture, Sixteenth and Seventeenth Centuries
ARC 435 - Islamic Architecture
ARC 436 - Modern Architecture: The International Style to Present

## Italian Minor

Italian Language, Literature, and Culture
Stefano Giannini
309 H.B. Crouse
315-443-2136.

## Minor Requirements

A minor in Italian consists of a minimum of 18 credits including ITA 202 and 15 other credits in upper-division courses. Twelve of the 15 credits in upper-division courses are in courses taught in Italian; 3 of the credits in upper-division courses may be taught in Italian, in English, or in English with readings in Italian.* A LIT course at the 200 level taught in English by Italian Program faculty may be substituted for an upper-division course taught in English to satisfy the minor requirements.

## Note:

*As approved by the program advisor.
Jewish Education Minor
Jewish Education Minor

## Coordinator:

Corinne Roth Smith, Professor
157 Huntington Hall, 315-443-9321, crsmith@ syr.edu
The primary purpose of this minor is to better prepare SU undergraduates to teach in Jewish congregational schools, camps, community centers, youth organizations.

## Admission:

## GPA 2.8 or above

1-2 page statement on why the individual would like to declare a minor in Jewish Education

The JSP Director and Jewish Education Minor Coordinator will review each candidate's courses completed and professional
disposition standards before recommending a student for a community internship. Those not approved will be asked to un-declare the minor.

## Curriculum Requirements

## Core Courses: (6 credits)

## JSP 114 - The Bible

JSP 215 - The Hebrew Bible
JSP 135 - Judaism

## Additional Judaic Studies Content (9 credits)

Must be 300 level and above
Must include courses cross-listed with JSP, including those offered abroad. Other courses with Judaic Studies content can be approved by the JSP director.

One course in history, sociology or political science is strongly recommended.

## Pedagogy Courses (7-9 credits):

EDU 303 - Teaching and Learning for Inclusive Schooling (includes field experience) or
EDU 204 - Principles of Learning in Inclusive Classrooms (includes field experience)

## Students in Teacher Preparation Programs

Students in Teacher Preparation Programs will overlap this course with their education major.

EDU 355 - Fundamentals of Teaching for NonMajors (course to be regularized). Students in Teacher Preparation Programs may substitute a methods course from their teacher preparation area for this course.

EDU 470 - Experience Credit (Practicum in Jewish Education (1-2 cr.)) (non-teacher preparation majors complete two credits/semesters, and enroll concurrently with EDU 355 ; Teacher Preparation majors complete one credit/ semester and enroll in their field specific methods course prior to or concurrent with EDU 470):

The practicum semester(s) will include sessions during which congregational/agency educators convey supplementary information on Jewish traditions, modes of thought, and teaching strategies.

## Total Credits: 22-24

## Additional Hebrew requirement:

Students must complete HEB 101 (4 cr.), or achieve placement test results placing them into HEB 102 or higher. (Students are not required to
take HEB 102, however). This requirement must be completed before the internship semester.

## Note:

Students in the Inclusive Elementary and Special Education program can best fit the Judaic Studies courses into their curriculum if they are Human Thought and Expression concentrators.

## Jewish Studies Minor

Zachary J. Braiterman, Director
zbraiter@syr.edu
501 Hall of Languages
315-443-5719
This interdisciplinary minor explores Modern Jewish culture and religion. Faculty research and teaching focus on the Hebrew Bible, Hebrew and Yiddish fiction, European and American literature, Jews in modern Europe, the arts, modern Judaic thought and culture, Israel, and the PalestinianIsraeli conflict. The minor provides broad, interdisciplinary knowledge of Jewish experience both historical and contemporary, and is meant to prepare students for further pursuits in Jewish culture, history, and religion upon graduation, either academically or in private life. The Judaic Studies Program offers courses and advising to students, and a range of events (lectures, films, musical performances, etc.) for students, faculty, and the larger community. Graduate students are eligible to apply for the Benjamin Fellowship, and all students may submit Holocaust-related papers to the undergraduate and graduate Kalina Prize competition.

## Requirements

## The minor requires 18 credits in Jewish Studies

Students take a 6 credit core, which includes two courses selected from:

JSP 114 - The Bible
JSP 135 - Judaism
JSP 231 - Jewish Literature

## An Additional 9 credits are Required in Related Courses

An additional 9 credits are required in related courses chosen in consultation with the director of the program. Two years of Hebrew are recommended but not required.
JSP 300 - Selected Topics (relevant sections)
JSP 307 - The Temple and the Dead Sea Scrolls
JSP 311 - The Bible as Literature
JSP 331 - European and American Jewish Literature

JSP 333 - Yiddish Literature in Translation
JSP 334 - Modern Judaism
JSP 335 - Israeli Literature and Culture
JSP 337 - Shoah: Responding to the Holocaust
JSP 400 - Selected Topics (relevant sections)
JSP 435 - Modern Jewish Thought
JSP 490 - Independent Study (by petition)
JSP 500 - Selected Topics
HEB 201 - Hebrew III
HEB 202 - Hebrew IV
HEB 301 - Advanced Hebrew I
HEB 303 - Advanced Hebrew II

## Plus the following 3 credits:

JSP 439 - Jewish Studies Seminar

## Latin American Studies Minor

Myrna Garcia, Director and Program Advisor mygarcia@syr.edu
310 H.B.C.
315-443-9489

## Faculty:

Doug Armstrong, Hans Buechler, Gail Bulman, John Burdick, Horace Campbell, Luis Castaneda, AH Peter Castro, Matt Cleary, Pedro Cuperman, Francine D'Amico, Geraldine de Berly, Pedro DiPietro, Kwame Dixon, Kathryn Everly, Stephanie Fetta, Alejandro Garcia, Bea Gonzalez, Martha Hanson, Dennis Harrod, Sydney Hutchinson, Amy Lutz, Gladys McCormick, Roberto Moreno, Arthur Paris, Jane Read, Alicia Rios, David Robinson, Silvio Torres-Saillant, Jamie Winder

## Requirements

The minor in Latin American Studies requires a total of 18 credits from the list above; 12 credits are in courses numbered above 299. For Spanish language majors and students whose first language is Spanish, at least 9 credits must be in non-language courses. Students intending to declare a minor in Latin American Studies are strongly advised to contact the Director of the Latino-Latin American Program to discuss the selection of suitable courses and other issues.

## Declaring a minor

Students intending to declare a minor in Latin American Studies contact the Director of the Latino-Latin American Program to discuss the selection of suitable courses and other issues.

Courses should be selected from the following list in consultation with the advisor. Additional courses in Anthropology, English and Textual

Studies, History, History of Art, History of Music, Geography, Political Sciences and Spanish are recommended and may be petitioned for LAS credit in consultation with the program director.

## Anthropology

LAS 318 - South American Cultures
LAS 523 - Globalization and its Discontents in Latin America

## English

LAS 200 - Selected Topics Ethnic Literary Traditions (relevant courses)

ETS 230 - Topics in Ethnic Literary Traditions Ethnic Literary Traditions (relevant courses)
LAS 300 - Selected Topics Latino Fiction (relevant courses)

ETS 350 - Topics in Reading Nation and Empire Latino Fiction (relevant courses)
ETS 315 - Topics in Ethnic Literatures and Cultures U.S. Literature of the Caribbean Diaspora

## Geography

LAS 321 - Latin American Development: Spatial Aspects

LAS 325 - Colonialism in Latin America
LAS 520 - Research on Latin America

## History

LAS 322 - Colonial Latin America
LAS 313 - Modern Latin America
LAS 324 - Recent Latin American History
LAS 371 - Gender in Latin American History

## Political Science

LAS 333 - Politics of Latin America
LAS 335 - Mexico and the United States

## Spanish

LAS 300 - Selected Topics Approaches to Reading Texts

LAS 302 - Introduction to Latin American Literature
LAS 433 - Business Spanish
LAS 461 - Nobel Prize Writers of the SpanishSpeaking World

LAS 462 - Border Culture
LAS 463 - Contemporary Latin American Theater
LAS 465 - Literature and Popular Culture
LAS 467 - Film and Literature
LAS 471 - Contemporary Latin American Literature

LAS 475 - Women, Myth and Nation in Latin American Literature

LAS 479 - Perspectives on Mexico and Central America: Literature, Art, Film

LAS 481 - The Literature of Latinos in the United States

LAS 489 - Hispanic Caribbean Narrative and Film
LAS 493 - Afro-Hispanic Topics in Caribbean Literature

LAS 494 - Hispanic Caribbean Literature
LAS 495 - Marginal Cultures in Hispanic Caribbean Literature

LAS 497 - Text and Context in Cuban Revolutionary Literature

## LGBT Studies Minor

Lesbian, Gay, Bisexual and Transgender Studies Gerald Greenberg
441 Hall of Languages
ggreenbe@syr.edu
315-443-1414

## Faculty

Barbara Applebaum, Dorri Beam, Susan Branson, Nadaya Brantley, Virginia Burrus, Linda Carty, D. Chase, James Catalano, Stephanie Clare, Tucker B. Culbertson, Albrecht Diem, Pedro DiPietro, Carol Fadda-Conrey, Beth Ferri, Roger Hallas, Margaret Himley, Thomas M. Keck, Claudia Klaver, Andrew S. London, Laurie Marhoefer, Vivian M. May, Charles Morris, Donald E. Morton, Dana M. Olwan, Jackie Orr, Erin Rand, Robin Riley, William A. Robert, Perry Singleton, Mattheiu vander Meer

## Requirements

The minor in Lesbian, Gay, Bisexual and Transgender (LGBT) Studies requires 18 credits of course work: two lower division core courses (QSX 111 - Queer Histories, Communities, and Politics and QSX 112 - Sexualities, Genders, Bodies) and four upper division courses approved for the minor. QSX 111 counts towards the social science requirement and QSX 112 counts towards the humanities divisional requirement in the Arts and Sciences Core Curriculum: both QSX 111 and QSX 112 count toward the critical reflections requirement. There are no cluster requirements for students; students may take any of the approved courses or petition to substitute other courses with substantial LGBT content or projects. Currently approved courses include those listed below. Course with partial focus on LGBT content have been marked with an asterisk. No more than two of these courses can be used to fulfill the requirements of the minor.

## Two lower division core courses (required)

## Queer Histories, Communities, and Politics

Explores and analyzes queer histories, communities and politics from the ancient past to the contemporary, global present through an interdisciplinary reading of research, theory, memoir, biography, fiction, and documentary film.
QSX 111 - Queer Histories, Communities, and Politics

## Sexualities, Genders, Bodies

Explores how sexuality, gender, and embodiment are understood across communities and through time with an interdisciplinary analysis of literature, film, mass media, websites, research, and theory.
QSX 112 - Sexualities, Genders, Bodies

## The Courses for the Minor are Clustered

 ThematicallyThe courses for the minor are clustered thematically, and each cluster will offer at least one course every fourth semester. Often, more than one course will be offered per semester.

Communities, Places, and Identities:
This cluster explores the social and spatial dimensions of sexuality, the production of sexual identities, and LGBT lives and experiences.
CRS 568 - Rhetoric of Social Change *
ETS 360 - Topics in Reading Gender and Sexualities

QSX 300 - Selected Topics Sex, Gender and the City (SU London only)
QSX 306 - Sexuality in Spain
QSX 400 - Selected Topics: Queer Sexuality Sexualities and Social Life in Spain (SU Madrid only)

SOC 456 - LGBT Studies in Sociology
WGS 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies

## Histories and Knowledges:

This cluster analyzes the ways knowledge about sexuality is and has been constructed through social structures, cultural contexts, systems of power, epistemologies, and analytical practices.
AAS 309 - Race, Gender and Sexuality in the African Diaspora

CRS 360 - Communication and Rhetorical Studies in Perspective *

ETS 360 - Topics in Reading Gender and

Sexualities
ETS 360 - Queer Theories/Queer Cultures
HST 362 - Nazi Germany and the Holocaust *
HST 389 - LGBT History
REL 310 - Medieval Christianities *
QSX 348 - Queering the Middle Ages?
REL 357 - Queerly Religious
WGS 438 - Trans Genders and Sexualities
Representation, Media, and Performance:

This cluster addresses the ways LGBT cultures and practices have been performed and represented in art and culture.
CRS 360 - Communication and Rhetorical Studies in Perspective *

ETS 360 - Topics in Reading Gender and Sexualities Documenting Sexualities

ETS 360 - Topics in Reading Gender and Sexualities James Bond and British Masculinity

* (SU London only)

ETS 360 - Topics in Reading Gender and Sexualities Cinema and Sexual Difference

ETS 360 - Topics in Reading Gender and Sexualities What Was Sex? Nineteenth-Century American Literature and the History of Sexuality

QSX 400 - Selected Topics: Queer Sexuality Queer Cinema in Europe (SU Florence only)

QSX 400 - Selected Topics: Queer
Sexuality Practice of Eros: A History of Sexuality
in Europe (SU Florence only)
WRT 422 - Studies in Creative Nonfiction
WGS 365 - Negotiating Difference:Coming of Age Narratives

## Institutions and Public Policy:

This cluster studies the ways legal, political, and educational institutions both shape and are shaped by LGBT lives and experiences.

CFE 300 - Selected Topics Queer Youth, Straight
Schools: LGBT Issues in Education
PSC 384 - Sexuality and the Law
SWK 437 - LGBTQ Health and Well Being

## Linguistic Studies Minor

Jaklin Kornfilt
340 HB Crouse
315-443-5375

## Faculty

Tej K. Bhatia, Amanda Brown, Richard W. Buttny, Kevan Edwards, Gerald R. Greenberg, Diane

Grimes, Rania Habib, Jaklin Kornfilt, Elizabeth D. Liddy, Amy Lutz, , Linda Milosky, Kenji Oda, Amardo Rodriguez, Robert A. Rubinstein, Maria Emma Ticio Quesada, Robert Van Gulick, Susan S. Wadley, Bei Yu

LIN 201 is an introduction to linguistic studies and is a prerequisite to the minor and to advanced courses. It does not, however, count toward minor requirements.

To complete a minor in linguistic studies, students must successfully complete 18 credits.

LIN 301 - Introductory Linguistic Analysis and LIN 441 - Syntactic Analysis are required. Of the remaining 12 credits, 6 must be in courses numbered above 299. Students choose four courses from those listed below.

## Major Requirements

## Psycholinguistics/Sociolinguistics/ History and Structure of Language <br> CFS 365 - Language Development in Children \& Families

LIN 251 - English Words
LIN 431 - Phonological Analysis
LIN 451 - Morphological Analysis
LIN 461 - Introduction to Historical Linguistics
LIN 471 - Dimensions of Bilingualism and Multiculturalism

COG 301 - Introduction to Cognitive Science
LIN 472 - Language, Culture, and Society
LIN 491 - Universal Grammar and Second Language Acquisition
LIN 571 - Topics in Sociolinguistics
LIN 591 - Second Language Acquisition
CRS 430-Intercultural Communication

## Languages of the World

LIN 202 - Languages of the World
LIN 472 - Language, Culture, and Society
CRS 430 - Intercultural Communication
Philosophy of Language
CIS 468 - Natural Language Processing
CIS 473 - Automata and Computability
PHI 251 - Logic
PHI 551 - Mathematical Logic
PHI 565 - Philosophy of Language
Language Pedagogy
LIN 421 - Introduction to Methodology of Teaching

Languages: English/Foreign Language Teaching
LIN 422 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching

## Logic Minor

Kevan Edwards
541 Hall of Languages
315-443-2245

## Faculty

Steven Diaz, Janice Dowell, Kevan Edwards, Jaklin Kornfilt, Jeff Meyer, Michael Rieppel

## Requirements

The minor in Logic requires 18 credits, selected in consultation with the program advisor. At least 12 credits are in courses numbered above 299. Students take the following courses (though suitable courses in special topics may be substituted, subject to the program advisor's approval). Introduction to Concepts of Logic (two courses required)
PHI 251 - Logic

## And one of the following three courses

PHI 351 - Logic and Language
CIS 375 - Introduction to Discrete Mathematics
MAT 375 - Introduction to Abstract Mathematics

## Techniques of Logical Investigation <br> (at least one course)

CIS 473 - Automata and Computability
CIS 521 - Discrete Mathematics and Data Structures

PHI 551 - Mathematical Logic
PHI 552 - Modal Logic
Other Courses (choose two or three)
CIS 473 - Automata and Computability
CIS 468 - Natural Language Processing
CIS 567 - Knowledge Representation and Reasoning

LIN 441 - Syntactic Analysis
MAT 593 - History of Mathematics
PHI 373 - Introduction to the Philosophy of Science

PHI 487 - History of Epistemology
PHI 555 - Philosophy of Mathematics
PHI 565 - Philosophy of Language

## Mathematics Minor

Adam Lutoborski
315-443-1489
alutobor@syr.edu

## Faculty

Uday Banerjee, Pinyuen Chen, Dan Coman, J. Theodore Cox, Steven Diaz, Helen M. Doerr, Jack E. Graver, Philip S. Griffin, Peter D. Horn, Tadeusz Iwaniec, Hyune-Ju Kim, Mark Kleiner, Leonid Kovalev, Loredana Lanzani, Graham J. Leuschke, Adam Lutoborski, Joanna O. Masingila, Terry R. McConnell, Claudia Miller, Jani Onninen, Evgeny Poletsky, Declan Quinn, Lixin Shen, John Ucci, Gregory Verchota, Andrew Vogel, William Volterman, Yi (Grace) Wang, Stephan Wehrli, William Wylie, Yuan Yuan, Dan Zacharia

## Requirements

The minor in mathematics requires the completion of 21 credits with a grade point average of 2.0 or better. Students complete a 15 -credit core that includes the calculus sequence (MAT 295, MAT 296, MAT 397) and either MAT 331 (recommended) or MAT 485.

In addition, students select 6 credits in one of the following subject areas:

## Algebra:

MAT 531
MAT 531 - Second Course in Linear Algebra
And one course chosen from
MAT 534 - Introduction to Abstract Algebra
MAT 541 - Introduction to Number Theory
MAT 545 - Introduction to Combinatorics
Analysis:
Any two courses chosen from
MAT 511 - Advanced Calculus
MAT 512 - Introduction to Real Analysis II
MAT 513 - Introduction to Complex Analysis
MAT 562 - Elementary Topology

## Applied Mathematics:

Any two courses chosen from
MAT 517 - Partial Differential Equations and Fourier Series
MAT 518 - Fourier Series, Transforms and Wavelets

MAT 532 - Applied Linear Algebra
Differential Equations:
MAT 414 - Introduction to Ordinary Differential Equations

MAT 517 - Partial Differential Equations and Fourier Series

Geometry:
MAT 531 - Second Course in Linear Algebra
MAT 551 - Fundamental Concepts of Geometry or

MAT 531 - Second Course in Linear Algebra
MAT 554 - Differential Geometry
Probability and Statistics:
MAT 521 - Introduction to Probability
MAT 525 - Mathematical Statistics
or
MAT 521 - Introduction to Probability
MAT 526 - Introduction to Stochastic Processes

## Note:

Students who take MAT 485 instead of MAT 331 may not use the differential equations sequence to satisfy minor requirements.

## Medical Anthropology Minor

## Contact:

Robert Rubinstein, rar@syr.edu

## Faculty

Tom Brutsaert, Sandra D. Lane, Shannon A. Novak, Deborah Pellow, Rebecca Peters, Robert A. Rubinstein, Maureen Trudelle Schwarz, John Marshall Townsend, Cecilia Van Hollen
Medical anthropology is a vibrant subfield of anthropology with both academic and practical dimensions that explores the relationships among society, culture, health, illness, and medicine. This minor is designed to introduce undergraduates to the field of medical anthropology in order to prepare them for applied work or future research in the area of global health. This minor may be appropriate for students pursuing degrees in the health sciences, international relations, STS, or other social sciences such as anthropology, sociology or political science.

## General Requirements

To complete a minor in medical anthropology, students must take a minimum of 18 credits, with

12 credits at the 300-400 level.

## Required courses: 12 credits

ANT 111 - Introduction to Cultural Anthropology
ANT 131 - Introduction to Biological Anthropology
ANT 481 - Ethnographic Techniques
One of the following courses:
ANT 357 - Health, Healing, and Culture
ANT 465 - Critical Issues in Medical Anthropology
ANT 463 - Global Health
HTW 463 - Global Health
Elective courses: 6 credits
Students must take at least 2 courses from the following list:
ANT 357 - Health, Healing, and Culture
ANT 382 - Health in the Middle East
ANT 400 - Selected Topics Medical and Religious Pluralism or

ANT 400 - Selected Topics Reading the Body
ANT 433 - Human Osteology
ANT 434 - Anthropology of Death
ANT 436 - Bioarchaeology
ANT 455 - Culture and AIDS
ANT 462 - Culture and Reproductive Health and Medicine

ANT 463 - Global Health
ANT 465 - Critical Issues in Medical Anthropology
ANT 467 - Culture and Mental Disorders
ANT 469 - Medical Anthropology in Ecological Perspective

HTW 401 - Epidemiology
HTW 415 - Public Health Ethics

## Additional Information

Students may petition to have other courses count towards the Minor in Medical Anthropology. Petitions must be approved by the Medical Anthropology Minor Advisor located in the Department of Anthropology.

## Medieval and Renaissance Studies Minor

Amanda Eubanks Winkler, Advisor
308 Bowne Hall
315-443-4584
awinkler@syr.edu

## Faculty

Crystal Bartolovich, Jean-François Bédard, Dympna Callaghan,Sally Cornelison, Albrecht Diem, Laurinda Dixon, Wayne Franits, Hope Glidden, Samantha Kahn Herrick, Chris Kyle, Matilde M. Mateo, Gary M. Radke, William Robert, Dennis Romano, Stephanie Shirilan, Junko Takeda, Matthieu van der Meer, Amanda Winkler

## Requirements

Medieval and Renaissance Studies explores the birth of our own familiar world while introducing students to an often alien and mysterious past. Students will embark an intellectual adventure through coursework that focuses on the advent of science, the voyages of discovery, the birth of democracy, the writings of the great poets from Dante to Shakespeare, the monumental achievements of artists such as Michelangelo and Rembrandt, the birth of print culture and censorship, monastic life, the Reformation, the beginnings of capitalism and consumerism, as well as the power of city states.
The minor is open to all undergraduates university-wide.

## Total Credits Needed: 18 credits distributed as follows

I. Two courses ( 6 credits) from the group of courses listed below (no restrictions):

ETS 113 - Survey of British Literature, Beginnings to 1789
ETS 121 - Introduction to Shakespeare
HOA 105 - Arts and Ideas I
HOM 165 - Understanding Music I
HST 111 - Early Modern Europe, 1350-1815
HST 211 - Medieval and Renaissance Europe
HST 212 - Religion in Medieval and Reformation Europe
HST 231 - English History
LIT 245 - Florence and Renaissance Civilization
II. The remaining 12 credits must be courses at the 300 level or above

## III. One upper division history [HST] course (3 credits)

One upper division history [HST] course (3 credits) on a Medieval and/or Renaissance topic

## IV. Three additional upper division courses (9 credits)

Three additional upper division courses (9 credits) on Medieval and/or Renaissance topics. See List of courses below.

## V. No more than three courses (9 credits)

No more than three courses ( 9 credits) upper or lower division may be taken in the same discipline.

## List of Upper Division Courses in Medieval and Renaissance Studies

N.B. In addition to the courses below, there are many courses in ETS, History (HST 300 - Selected Topics, HST 401 - Senior Seminar), LIT/ITA and other departments whose subject changes from semester to semester and that can be counted toward the minor. Courses are also offered in the various SU Abroad centers that may also be counted toward the minor. Those wishing to have any of these courses count should petition the coordinator (advisor) of the Medieval and Renaissance Studies Minor to have these courses count toward the minor.
HOA 410 - Art and Ideology in Medieval Spain
HOA 323 - Sixteenth Century Italian Architecture
HOA 322 - Early Renaissance Architecture in Italy 1400-1529

HOA 324 - Italian Seventeenth Century Architecture

HOA 430 - Northern Renaissance Art: 15th Century

HOA 431 - Northern Renaissance Art: 16th Century

HOA 311 - Italian Medieval Art
HOA 312 - Romanesque Art
HOA 313 - Gothic Art
DRA 561 - Music and Shakespeare
HOA 421 - Early Renaissance Art
HOA 422 - High Renaissance Art/Mannerism
HOA 425 - Leonardo da Vinci: Artist and Engineer
HOA 426 - Michelangelo' Italy
HOA 445 - Baroque Art in Southern Europe
HOA 446 - Baroque Art in Northern Europe
HOA 439 - French Architecture, Sixteenth and Seventeenth Centuries
HOA 530 - History of Printmaking
HOA 540-17th Century Dutch Painting
HOA 541 - Arts and Ideas in the 17th Century

HST 310 - The Early Middle Ages
HST 311 - Medieval Civilization
HST 312 - Reformation of the 16th Century
HST 313 - French Revolution: Sun King to Guillotine

HST 355 - The Italian Renaissance
HST 357 - Culture and politics in Early Modern England: Henry VIII to Charles I

HST 358 - Revolution and Civil War in 17th Century England
HST 367 - Plague to AIDS
HST 376 - Renaissance London (Honors)
HUM 420 - Studies in Renaissance Cultural History
PHI 311 - The Rationalists
SPA 441 - Medieval and Golden Age Literature
SPA 443 - Cervantes

## Middle Eastern Studies Minor

Yüksel Sezgin
mes@maxwell.syr.edu
315-443-4431

## Faculty:

Carol Babiracki, Hossein Bashiriyeh, Mehrzad Boroujerdi, Zachary Braiterman, Erella Brown, Miriam Elman, Carol Fadda-Conrey, Ken Frieden, Rania Habib, Susan Henderson, Violette Humsi, Amy Kallander, Tazim Kassam, Osamah Khalil, Amos Kiewe, Natalie Koch, Jaklin Kornfilt, Sandy Lane, Ahmed Abdel Meguid, Dana Olwan, Kara Richardson, Robert Rubenstein, Sam Salem, James Watts, Corri Zoli

This interdisciplinary minor examines the history, culture, languages, religions, and politics of the Middle East. Faculty research and teaching focus on ancient source texts, the art, literature, history, and culture of the Middle East; conflict resolution; gender issues; and contemporary political issues. Students may study these and other aspects of the Middle East.

## Requirements

The minor requires 20 credits in Middle Eastern Studies, at least 12 in courses numbered 300 or above. Students take an 11 credit core consisting of:
an introductory course (either MES 344/PSC 344 or MES 318/HST 318)
two consecutive courses in one regional language (Arabic, Hebrew, Persian, Turkish) between levels 101 and 202

Nine additional credits are required in upper division courses from at least two different
departments including but not limited to those listed below. Students may take any of the approved courses or petition to substitute other courses with substantial Middle East content.

## Approved Courses:

MES 382 - Health in the Middle East
MES 468 - Middle East in Anthropological Perspective

ARB 301 - Arabic V
ARB 302 - Arabic VI
ARC 435 - Islamic Architecture
MES 406 - The Middle East in Graphic Novels
MES 315 - Arab American Literature and Culture
HEB 301 - Advanced Hebrew I
HEB 303 - Advanced Hebrew II
HEB 401 - Hebrew Literature in the Original
MES 318 - The Middle East to 1900
MES 319 - The Middle East in the 20th Century
HST 379 - Gender, Race, and Colonialism
HUM 404 - 'AZAHAR’ The Islamic Conquest and the Christian Reconquest

MES 336 - Arabic Cultures
MES 386 - Sounds of the Silk Road
MES 368 - Islam and the West
MES 350 - Gender, Violence, and Sexualities in the "War on Terror"

MES 360 - Reading Gender and Sexualities: Gender and Sexuality in the Arab World

PHI 308 - Classical Islamic Philosophy
MES 342 - Religion and Politics in the IsraeliPalestinian Conflict

MES 344 - Politics of the Middle East
MES 345 - Islam and Politics in Asia
MES 349 - Politics of Iran
PSC 362 - Religion, Identity and Power
MES 366 - Representations of the Middle East
MES 367- Oil, Water and War
MES 368 - Islam and the West or
MES 391 - Revolutions in the Middle East
MES 392 - Islamism and Islamist Movements Today

MES 393 - Middle Eastern Political Systems
MES 394 - History of Islamic Political Thought
MES 395 - Democratization in the Muslim World
REL 301 - Ancient Near Eastern Religions and Cultures

REL 307 - The Temple and the Dead Sea Scrolls

MES 308 - Ancient Judaism and the Origins of Christianity

REL 311 - The Bible as Literature
MES 321 - Christians, Jews and Muslims
REL 334 - Modern Judaism
REL 335 - Israeli Literature and Culture
MES 364 - Enchanting Words: Muslim Poets, Singers and Storytellers

MES 365 - God and Beauty in Islamic Art
REL 435 - Modern Jewish Thought
MES 465 - Beyond the Veil: Gender Politics in Islam

WGS 454 - Family and Gender in Contemporary Italy

## Music History and Cultures Minor

Theo Cateforis, Chair
308 Bowne Hall
315-443-4184
Amanda Winkler, Director of Undergraduate Studies
308 Bowne Hall
315-443-4584

## Faculty

Carol Babiracki, Theo Cateforis, Rodney Foster, Sydney Hutchinson, Bette Kahler, Stephen Meyer, Amanda Winkler

## Minor Requirements

The minor in music history and cultures requires 18 credits of coursework drawn from the departmental HOM offerings. Of these 18 credits, 6 may be earned in courses from the lowerdivision, music history courses (100 and 200 level) while the remaining 12 must be earned in upper-level ( 300 level and above). Students may petition to have up to 6 credits of selected topics courses in music history (HOM 300, HOM 400, HOM 500 or HOM 600) count toward the minor. In addition, students may petition to have up to 3 credits of music history courses taken outside the department count toward the minor.

## Native American Studies Minor

Native American Studies
Scott Manning Stevens
314 Tolley Humanities
scsteven@syr.edu
315-443-8785

## Faculty

Percy Abrams, Douglas V. Armstrong, Philip P.

Arnold, Christopher R. DeCorse, Pedro DiPietro, Stephanie A. Fetta, Gregg Lambert, Richard R. Loder, Dana Olwan, Guido Pezzarossi, Maureen Trudelle Schwarz, Sascha Scott

The Minor in Native American Studies provides an understanding of the religious, historical, political and aesthetic dimensions of the Native Nations of the Americas. In consultation with the advisor students plan the programming according to their individual needs and interests.

## Requirements

The minor is open to the full university community. It requires completion of six courses (18 credits) from two different departments, with NAT 105 strongly recommended. Twelve of the 18 credits must be in courses numbered above 299. Other courses including those from ESF may be included if approved by the Director. Examples of available courses leading to a minor in Native American Studies could include (but are in no way limited to) the following:
NAT 105 - Introduction to Native American Studies
NAT 142 - Native American Religion
SOC 248 - Ethnic Inequalities and Intergroup Relations

ETS 230 - Topics in Ethnic Literary Traditions
Native American Literature
ANT 273 - Indigenous Religions and
NAT 244 - Indigenous Religions
NAT 300 - Selected Topics in Native American Studies Indigenous Issues and the Environment

NAT 301 - Iroquois Verb Morphology I
NAT 305 - Iroquois Phonetics and Phonology
NAT 302 - Iroquois Verb Morphology II
NAT 306 - Iroquois Syntax and Semantics
NAT 308 - Iroquois Linguistics in Practice
ETS 310 - Topics in Literary Periods Contemporary
American Indian Fiction or
NAT 400 - Selected Topics in Native American Studies Literary Periods: Contemporary American Indian Fiction

NAT 400 - Selected Topics in Native American Studies Ethnic Literatures and Cultures: American Indian Political Literature 820-1930
NAT 346 - Native North American Art
HST 302 - Early American History
HST 330 - The Iroquois
NAT 323 - Peoples and Cultures of North America
NAT 347 - Religion and the Conquest of America
NAT 348 - Religion and American Consumerism
ETS 315 - Topics in Ethnic Literatures and Cultures
NAT 441 - Federal Indian Policy and Native
American Identity
NAT 444 - Contemporary Native American
Movements
NAT 445 - Public Policy and Archaeology
NAT 447 - Archaeology of North America
NAT 456 - Representations of Indigenous Peoples
in Popular Culture
NAT 459 - Contemporary Native North American
Issues
NAT 461 - Museums and Native Americans
EFB 496 - Plants and Culture

## Additional Information

Other selected topics courses may apply when content is relevant and permission is secured from the director of Native American Studies.

## Philosophy Minor

## Director of

## Undergraduate Studies

541 Hall of Languages
315-443-2245

## Faculty

Kenneth Baynes, Frederick C. Beiser, Benjamin Bradley, Janice Dowell, Kevan Edwards, Kim Frost, André Gallois, Samuel Gorovitz, Mark Heller, Kris McDaniel, Thomas McKay, Hille Paakkunainen, Kara Richardson, Emily E. Robertson, John E. Robertson, David Sobel, Laurence Thomas, Robert Van Gulick

## Requirements

To complete a minor in philosophy, students take 18 credits, 12 of which are in philosophy courses numbered 300 or above. In order for a course to count towards a student's minor program, the student must receive a grade of C or better.

## Physics Minor

## Director of

Undergraduate Studies
201 Physics Building
315-443-3901

## Minor Requirements

To complete a minor in physics, students take 20 credits in physics, PHY 211 (or PHY 215), PHY 212 (or PHY 216), PHY 221, PHY 222 are
required; an additional 12 credits of coursework numbered 300 or above is required.

## Policy Studies Minor

## Contact:

Michelle Walker
Director, Community Programs, Public Affairs
Program
102 Maxwell Hall
315-443-4683
Email: mawalker@syr.edu
The minor in policy studies requires 18 credits, of which at least 12 credits include courses numbered 300 or above.

## Required Courses

PAF 101 - An Introduction to the Analysis of Public Policy

ECN 203 - Economic Ideas and Issues
PAF 410 - Practicum in Public Policy

## Additional Information

The remaining 9 credits are taken from courses numbered 300 or above within one specialization.

## Political Science Minor

## Political Science

100 Eggers Hall
315-443-2416
Chair: Mehrzad Boroujerdi
Political science is the study of politics, government, and their relationship with other aspects of society. Courses in political science enable students to use political theory and empirical analyses to make sense of their world, to interpret political phenomena in the United States and in other areas of the world, and to understand world politics. Skills in research, analysis, and critical thinking that political science students acquire help to prepare them for careers in politics and government, journalism and communication, and business, as well as postgraduate study.

## Note:

Students are required to fulfill the requirements for the B.A. or minor in political science as stipulated in the course catalog for the academic year in which they declare their political science major or minor. Graduation with a B.A. or a minor in political science requires a 2.0 average in the upper-division coursework applied toward the major or minor.

## Minor Requirements

The minor in political science requires 18 credits of coursework. Students are required to take one of the following courses at the 100 level:
PSC 121 - American National Government and Politics or

PSC 129 - American National Government and Politics (Honors)
PSC 122 - American State and Local Government and Politics

PSC 123 - Comparative Government and Politics
PSC 124 - International Relations or
PSC 139 - International Relations (Honors)
PSC 125 - Political Theory

## Remaining Credits:

Of the remaining 15 credits, 12 are taken in courses numbered 300 or above. The remaining 3 credits may be taken at either the 100 level or in a course numbered 300 or above. PSC minors must take at least one course from the approved list of courses with international content (approved courses are designated with an asterisk [*], see list below).

## Courses

The courses regularly offered by the department for application toward the minor are listed below. Courses taken abroad may also count with the approval of the undergraduate advisor.

PSC 121 - American National Government and Politics (required for PSC majors)
PSC 122 - American State and Local Government and Politics

PSC 123 - Comparative Government and Politics

PSC 124 - International Relations *
PSC 125 - Political Theory
PSC 129 - American National Government and Politics (Honors)
PSC 139 - International Relations (Honors) *
PSC 202 - Introduction to Political Analysis (required for PSC major)
PSC 300 - Selected Topics
PSC 302 - Environmental Politics and Policy
PSC 303 - The Development of the American State
PSC 304 - The Judicial Process
PSC 305 - U.S. Congressional Politics
PSC 306 - African American Politics
PSC 307 - The Politics of Citizenship
PSC 308 - The Politics of U.S. Public Policy

PSC 309 - Interest Group Politics
PSC 311 - American Political Parties
PSC 312 - Urban Government and Politics
PSC 313 - Campaign Analysis
PSC 314 - Public Opinion and Electoral Behavior
PSC 315 - Politics and Media
PSC 316 - The Supreme Court in American Politics
PSC 317 - Local Internship
PSC 318 - Technology, Politics, and Environment
PSC 319 - Gender and Politics
PSC 321 - Populism and Conspiracy Culture
PSC 322 - International Security *
PSC 323 - Politics of the Executive Branch
PSC 324 - Constitutional Law I
PSC 325 - Constitutional Law II
PSC 326 - Foundations of American Political Thought
PSC 327 - Modern American Political Thought
PSC 328 - American Social Movements
PSC 329 - The Modern American Presidency
PSC 331 - Canadian Politics *
PSC 333 - Politics of Latin America *
PSC 334 - Mexico and the United States *
PSC 335 - Politics of East Asia *
PSC 337 - Political Psychology *
PSC 338 - Comparative Political Parties *
PSC 339 - Transitions to Democracy *
PSC 341 - Politics of Africa *
PSC 342 - Religion and Politics in the IsraeliPalestinian Conflict *
PSC 343 - Politics of Europe *
PSC 344 - Politics of the Middle East *
PSC 345 - Islam and Politics in Asia *
PSC 346 - Comparative Third World Politics *
PSC 347 - Politics of Russia *
PSC 348 - Politics and the Military *
PSC 349 - Politics of Iran *
PSC 350 - Problems in International Relations *
PSC 351 - Political Economy of Development *
PSC 352 - International Law *
PSC 353 - International Organization *
PSC 354 - Human Rights and Global Affairs *
PSC 355 - International Political Economy
PSC 356 - Political Conflict *
PSC 357 - U.S. Foreign Policy *

PSC 358 - Latin American International Relations *

PSC 359 - Foreign Policymaking *
PSC 361 - Politics in the Cyber-Age *
PSC 362 - Religion, Identity and Power *
PSC 363 - Ethics and International Relations *
PSC 364 - African International Relations *
PSC 365 - International Political Economy of the Third World *

PSC 366 - Representations of the Middle East *
PSC 367 - Oil, Water and War *
PSC 368 - Islam and the West *
PSC 369 - Global Migration *
PSC 371 - Democratic Theory and Politics
PSC 372 - Marxist Theory
PSC 373 - Political Philosophy: The Social Contract Tradition and its Critics

PSC 374 - Law and Society
PSC 375 - Philosophy of Law
PSC 377 - Religion and Politics
PSC 378 - Power and Identity
PSC 379 - American Slavery and the Holocaust *
PSC 382 - Contemporary Political Philosophy
PSC 384 - Sexuality and the Law
PSC 385 - Rationality and Politics
PSC 386 - Gender, Militarism, and War
PSC 387 - Ethnic Conflict
PSC 388 - Politics of Globalization *
PSC 389 - Politics of India *
PSC 391 - Revolutions in the Middle East *
PSC 392 - Islamism and Islamist Movements Today *
PSC 393 - Middle Eastern Political Systems *
PSC 394 - History of Islamic Political Thought *
PSC 395 - Democratization in the Muslim World *
PSC 396 - European Integration *
PSC 397 - Realism and Power Politics in International Relations *

PSC 398 - How the United States Became a Great Power *

PSC 399 - God in Political Theory
PSC 400 - Selected Topics
PSC 405 - Politics of the European Union *
PSC 406 - Citizenship from Modernity to Globalization *

PSC 409 - The European Union *
PSC 411 - Senior Seminars

PSC 412 - Global Governance: The United Nations System *

PSC 413 - Identity and Difference
PSC 414 - European Identity Seminar *
PSC 421 - Contemporary Central and Eastern Europe *
PSC 422 - Understanding 20th Century Spain *
PSC 424 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone *

PSC 425 - Hong Kong in the World Political Economy *

PSC 427 - Policy Seminar/Contemporary Europe
*
PSC 428 - Contemporary Issues in Chile and Latin America *
PSC 429 - European Human Rights *
PSC 330 - Political Economy of Gender in Industrialized Countries
PSC 431 - China in Transition *
PSC 432 - The Pale and Beyond *
PSC 441 - Europe and International Security Issues *

PSC 442 - Democratization in East Asia *
PSC 444 - Culture, Business and Political Economics in East Asia *

PSC 445 - Contemporary British Politics and the Modern World *

PSC 450 - Undergraduate Research Program
PSC 452 - Italy: Past, Present and Future Challenges *

PSC 453 - Twentieth Century Europe *
PSC 456 - Religion and Conflicts in Contemporary Europe *

PSC 458 - Contemporary Issues in Turkey *
PSC 360 - Sustainability Science and Policy
PSC 462 - Globalization Development and Environment *

PSC 470 - Experience Credit
PSC 490 - Independent Stud
Note:

* Foreign or international content


## Psychology Minor

## Requirements

The minor in psychology provides those students majoring in another discipline with a breadth or depth of experience in psychology to complement their major. For the minor, a total of 18 credits in psychology (PSY) including PSY 205, and

12 credits numbered 300 or above, must be completed. No more than 3 credits of experience credit (PSY 270 or PSY 470), independent study (PSY 290 or PSY 490), or Research in (PSY 291, PSY 292, PSY 293, PSY 294, PSY 491, PSY 492, PSY 493, or PSY 494) may be counted in the minimal credit hours for the minor in psychology. Courses taken with the pass/fail/audit option may not be applied toward the minor. Psychology (PSY) courses taken outside of Syracuse University for credit towards the minor must be approved by the department. A limit of 3 hours of transfer credit in Psychology may be applied toward the minor. To declare a minor, please visit 415 Huntington Hall and speak with an available adviser.

## Religion and Society Minor

Gustav Niebuhr
313 Tolley Humanities Building
rgniebuh@syr.edu
315-443-5723

## Faculty:

Philip P. Arnold, Michael Barkun, Mehrzad Boroujerdi, Zachary J. Braiterman, John S. Burdick, Ann Grodzins Gold, M. Gail Hamner, Susan Henderson, Samantha Kahn Herrick, Tazim R. Kassam, Prema Kurien, Norman
A. Kutcher, Micere Githae Mugo, R. Gustav Niebuhr, Marcia C. Robinson, Dennis Romano, Maureen Trudelle Schwarz, Laurence Thomas, Margaret Susan Thompson, Robert J. Thompson, Susan S. Wadley, Joanne P. Waghorne, Ernest E. Wallwork, James W. Watts

## Requirements

A minor in Religion and Society consists of a minimum of 18 credits (at least 12 credits in courses numbered 300 or above), of which 9 credits must be earned in courses from the Traditions list and 9 courses on the Religion and Society list.

## Traditions Courses (9 credits):

REL 281 - African Religions: An Introduction
REL 345 - African American Religious History
REL 244 - Indigenous Religions
REL 135 - Judaism
REL 101 - Religions of the World
REL 142 - Native American Religion
REL 156 - Christianity
REL 165 - Discovering Islam
REL 185 - Hinduism
REL 186 - Buddhism
REL 205 - Ancient Greek Religion

REL 206 - Greco-Roman Religion
REL 283 - India's Religious Worlds
REL 301 - Ancient Near Eastern Religions and Cultures

Religion and Society Courses (9 credits):

AAS 326 - Africa Since 1800
AAS 402 - Slavery and Abolition
AAS 543 - Religious Cultures of the American South

ANT 373 - Magic and Religion
ANT 440 - Topics in African Archaeology
ANT 471 - Religion and Society in Brazil
HST 210 - The Ancient World
HST 212 - Religion in Medieval and Reformation Europe

HST 310 - The Early Middle Ages and
HST 311 - Medieval Civilization
HST 312 - Reformation of the 16th Century
HST 318 - The Middle East to 1900
HST 319 - The Middle East in the 20th Century
HST 320 - Traditional China
HST 328 - Ancient and Medieval India
HST 354 - Decline and Fall of the Roman Empire
JSP 307 - The Temple and the Dead Sea Scrolls
JSP 334 - Modern Judaism
JSP 337 - Shoah: Responding to the Holocaust
PHI 379 - American Slavery and the Holocaust
PSC 345 - Islam and Politics in Asia
PSC 377 - Religion and Politics
REL 121 - Pilgrimage
REL 241 - Religious Diversity in America
REL 246 - Religion and Popular Culture
REL 252 - Ethical Decision Making
REL 300 - Selected Topics Religion and the News Media

REL 324 - Religions and Storytelling
REL 326 - Religion and Film
REL 347 - Religion and the Conquest of America
REL 348 - Religion and American Consumerism
REL 352 - Sociology of Religion and Morals
REL 375 - Religion and Ethics in Post-Freudian Depth Psychologies

REL 395 - Religions and the Natural Environment
REL 449 - Religious Dimensions of Whiteness

WGS 341 - Women, Abolition, and Religion in 19th Century America

WGS 384 - Goddesses, Women and Power in Hinduism

WGS 465 - Beyond the Veil: Gender Politics in Islam

## Religion and the Media Minor

Gustav Niebuhr
313 Tolley Humanities Building
rgniebuh@syr.edu
315-443-5723
Interdisciplinary in its offerings, the minor incorporates more than 25 courses within 10 departments and programs. The minor is open to any SU student, but it is designed specifically to guide students in journalism and related fields towards an essential understanding of religious traditions and major issues involving religion that they are likely to encounter in their careers.
The Religion and Media minor is built on the premise that religion is a vital part of life in the U.S. and many other nations. Debates about society and politics-about which the news media is expected to inform the public-often cannot be fully understood without reference to the religious ideas, organizations and movements.

## Requirements

The minor requires 18 credits of course work, at least 12 of which must be taken in courses numbered at the 300 -level or above. And two required courses REL 242 - Religious Issues in American Life and REL 343 - American Religions and the News Media.

The minor's courses are divided into two clusters. They include the listed courses, but is not restricted to them, allowing for the inclusion of other courses developed later. The minor requires students to take a course only from within the World Religions cluster; the other cluster contains electives and is intended to encourage intellectual exploration of the study of religion.

## World Religions

REL 281 - African Religions: An Introduction
REL 345 - African American Religious History
REL 244 - Indigenous Religions
REL 135 - Judaism
REL 114 - The Bible
REL 142 - Native American Religion
REL 156 - Christianity
REL 165 - Discovering Islam
REL 185 - Hinduism
REL 186 - Buddhism

## Issues in Religion

HST 318 - The Middle East to 1900
HST 320 - Traditional China
HST 325 - Africa to 1800
HST 332 - African American History: Through the 19th Century
HST 328 - Ancient and Medieval India
JSP 231 - Jewish Literature
JSP 334 - Modern Judaism
JSP 335 - Israeli Literature and Culture
JSP 392 - History of the Holocaust or
REL 392 - Music and the Sacred
PSC 345 - Islam and Politics in Asia
PSC 377 - Religion and Politics
PHI 325 - Existentialism
REL 103 - Religion and Sports
REL 107 - Religion, Literature, Film
REL 283 - India's Religious Worlds
REL 384 - Goddesses, Women and Power in Hinduism

REL 396 - Mysticism
REL 465 - Beyond the Veil: Gender Politics in Islam

## Religion Minor

## Chair:

Ann G. Gold
501 Hall of Languages
315-443-3861
Knowledge of religion is critical in today's world. The academic study of religion at Syracuse University offers students the opportunity to explore religion in a cross-cultural and interdisciplinary context. Students who take courses in religion learn to interpret the dynamics of religious convictions, actions, and expressions.

Religious traditions and practices engage such questions as: What kind of life is most worth living? How do we understand the nature of the world? How do we relate to ourselves and to others?

Students study religious life and thought from the perspectives of arts, ethics, gender, history, literature, mythology, philosophy, political theory, psychology, scriptural studies, social sciences, and theology.

The academic study of religion is a critical undertaking and an often transforming experience introducing students to unfamiliar aspects of their own world, and to the religious realities of our
global situation.
The Department of Religion has articulated three goals that shape its teaching and its expectations of what students in its courses and programs may expect to gain from this study:
to understand better the nature and diversity of religious expressions in the contemporary world and in history, and their power in peoples' personal and collective lives;
to think more deeply and critically about religious experience and its modes of expression and forms of interpretation;
to recognize and appreciate the difficulties and possibilities in a disciplined study of religion; and to become aware of a diversity of approaches and methods within that study.

## Requirements

Students take 18 credits of appropriate and approved work in keeping with the following conditions:
at least 12 credits in courses numbered 300 or above;
all credits will be taken in courses offered by the Department of Religion.

## Additional Information

Students interested in pursuing a minor in religion should contact the Director of Undergraduate Studies in 501 Hall of Languages, 315-4433861.

Russian and Central European<br>Studies Minor<br>Gerald R. Greenberg<br>441 Hall of Languages<br>315-443-1414

## Faculty

Patricia Burak, Gerald R. Greenberg, Erika Haber, Paul M. Hagenloh, Laurie Marhoefer, Zofia Sztechmiler, Brian D. Taylor, Karina von Tippelskirch
The Russian and Central European Studies minor is an interdisciplinary program that has been designed to acquaint students with the field of Russian and Central European studies through the study of art, culture, geography, history, language, literature, and political science.

## Minor Requirements

Students are required to take 18 credits from the courses listed below. Up to 6 credits may be below the 300 level. Courses must be taken from at least two of the eight categories listed below. In addition, students must complete the 201
level in GER, POL, RUS, TRK (or other appropriate languages as instruction becomes available).

## Languages, Literatures, and Linguistics

Any RUS, GER, POL, or TRK courses above the 201 level (Other appropriate courses with language prefixes as they become available, to be approved by the RCES advisor)

## Anthropology

ANT 428 - Transformation of Eastern Europe

## Art and Music Histories

HOA 462 - European Art Between the Wars

## Geography

GEO 331 - The European Union

## History

HST 314 - Europe from Bismarck to the First World War

HST 315 - Europe in the Age of Hitler and Stalin
HST 316 - Europe Since 1945
HST 361 - Germany to World War I, 1770-1918
HST 362 - Nazi Germany and the Holocaust
HST 364 - The Origins of Modern Russia
HST 365 - Russia in the Twentieth Century

## Literature in Translation

LIT 226 - Dostoevsky and Tolstoy
LIT 227 - Pasternak and Solzhenitsyn
LIT 331 - Russian Culture Through Fiction and Film
RUS 332 - Russian Fairy Tales and Folklore
RUS 361 - Russian Literary Film Adaptations

## Additional Information

(Other appropriate LIT courses to be approved by the RCES advisor as they become available)

## Philosophy

PHI 418 - Hegel, Marx, and Nietzsche

## Political Science

PSC 347 - Politics of Russia
PSC 372 - Marxist Theory

## Russian Minor

Gerald R. Greenberg
441 Hall of Languages
315-443-1414

## UNDERGRADUATE COURSE CATALOG

## Faculty

Gerald R. Greenberg, Erika Haber, Zofia Sztechmiler

## Minor Requirements

To complete a minor in Russian, students take 18 credits in RUS courses, 6 of which may be in lower-division courses.

## Sociology Minor

## Chair:

Madonna Harrington Meyer
302 Maxwell Hall, 315-443-2346

# Undergraduate Director 

Amy Lutz
426 Eggers Hall
315-443-3842

## Faculty

Dawn Dow, Cecilia A. Green, Madonna Harrington Meyer, Prema Kurien, Andrew S. London, Amy Lutz, Yingyi Ma, Jennifer Montez, Jackie Orr, Arthur Paris, Gretchen Purser, Rebecca Schewe, Merril Silverstein, Janet Wilmoth

## Minor Requirements

To complete a minor in Sociology, students are required to take 18 credits in Sociology, including:

SOC 101 - Introduction to Sociology
SOC 318 - Introduction to Research or
SOC 319 - Qualitative Methods in Sociology or WGS 317 - Qualitative Methods in Sociology

## Additional Four Courses

The 18 credits include an additional four courses, three of which must be numbered above 299 (one of the additional courses may be taken at the 200 level).

## South Asian Studies Minor

South Asian Studies
346 Eggers Hall
315-443-2553

## Faculty

Ahmed E. Abdel-Meguid, Sarosh Anklesaria, Shobha K. Bhatia, Tej K. Bhatia, Himika Bhattacharya, Mehrzad Boroujerdi, Richard L. Breyer, Tom Brutsaert, Manan Desai, Rashmi Gangamma, Tula Goenka, Ann Grodzins Gold,

Roger Hallas, Tazim R. Kassam, Prema Kurien, Devashish Mitra, Chandra Talpade Mohanty, Iswari P. Pandey, Sudha Raj, Kamala Ramadoss, Romita Ray, Lars Rodseth, Jaipaul L. Roopnarine, Anoop Sadanandan, Larry Schroeder, Yüksel Sezgin, Farhana Sultana, Cecilia Van Hollen, Susan S. Wadley, Joanne P. Waghorne

The minor in South Asian Studies provides an understanding of the religious, historical, economic, political and artistic dimensions of the nations of South Asia: Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, Sri Lanka. In consultation with the advisor, students plan the minor according to their individual interests.

## Requirements

The minor requires 18 credits, 12 of which are in courses numbered 300 or above. While not required we urge students to take at least one, if not more, courses in Hindi-Urdu.

Students are required to take one of these two courses:

HST 329 - Making of Modern India
SAS 329 - Making of Modern India
ANT 324 - Modern South Asian Cultures
SAS 324 - Modern South Asian Cultures
WGS 324 - Modern South Asian Cultures
In addition, at least three more courses are to be selected from the following list:

ANT 421 - Gender \& Sexuality in South Asia
SAS 426 - Cultures and Politics of Afghanistan and Pakistan

SAS 324 - Modern South Asian Cultures
SAS 385 - Music and Dance of India
SAS 101 - Hindi/Urdu I
SAS 102 - Hindi/Urdu II
SAS 201 - Hindi/Urdu III
SAS 202 - Hindi/Urdu IV
SAS 328 - Ancient and Medieval India
SAS 329 - Making of Modern India
SAS 389 - Politics of India
SAS 165 - Discovering Islam
SAS 185 - Hinduism
SAS 186 - Buddhism
SAS 283 - India's Religious Worlds
SAS 384 - Goddesses, Women and Power in Hinduism

SAS 396 - Art and Architecture of India
Students may choose one course from the following list:
GEO 367 - Gender in a Globalizing World
HOM 383 - Worlds of Dance
HOM 385 - Structure and Meaning in World Music
HOM 494 - Music and Gender
WGS 494 - Music and Gender
HST 375 - British Empire
REL 123 - Religious Auto/Biography
SAS 123 - Religious Auto/Biography
REL 324 - Religions and Storytelling
REL 367 - God and Beauty in Islamic Art
SAS 367 - God and Beauty in Islamic Art
REL 395 - Religions and the Natural Environment
REL 465 - Beyond the Veil: Gender Politics in Islam

SAS 465 - Beyond the Veil: Gender Politics in Islam

REL 487 - Global Hinduism
SOC 301 - Contemporary Asian Americans
SAS 301 - Contemporary Asian Americans

## Additional Information

In addition, students may petition to fulfill their requirements using selected topics courses dealing with South Asia or courses taken on study abroad programs in South Asia, as well as the Muslim Cultures Program in London.

## Spanish Minor

Myrna García Calderón Languages, Literatures, and Linguistics
310 HB Crouse
315-443-9489

## Minor Requirements

A minor in Spanish consists of a minimum of 18 credits including SPA 202, SPA 301, and 12 credits in other courses numbered 300 or above taught in Spanish.
At least 6 credits of 300 -level courses must be taken before entering the 400 level.

At least 6 credits of 400 -level courses are required for the minor.

Note: SPA 101, SPA 102, and SPA 201 DO NOT count toward the SPA major or minor. ONLY 3 CREDITS FROM SPA 202 can be counted toward the SPA major or minor and ONLY IF SPA 202 was taken at SU. Only up to 3 credits from 300 and 400 level conversation courses may be counted
toward SPA major or minor. SPA 211 and SPA 212 DO NOT count.

## Women's and Gender Studies Minor

Department of Women's and Gender Studies
208 Bowne Hall
315-443-3707

## Minor Requirements

The minor in women's and gender studies requires 21 credits of coursework (at least 15 in courses numbered 300 or above). In keeping with the guidelines for the major, the concentration requires students to take the five core courses listed below and two electives, one core elective, and one general elective chosen from an approved list of cross-listed courses.
WGS 101 - Introduction to Women's and Gender Studies

WGS 201 - Transnational Feminist Studies
WGS 301 - Feminist Theories
WGS 310 - Feminist Inquiries
WGS 410 - Advanced Studies in Feminist Thought

## Core Elective Listing (same as Major)

WGS 300 - Selected Topics (if taught by core WGS faculty)
WGS 343 - Latina Feminist Theories
WGS 354 - Gender, Militarism, and War
WGS 365 - Negotiating Difference:Coming of Age Narratives

WGS 395 - Gender and Popular Culture
WGS 400 - Selected Topics (if taught by core WGS faculty)
WGS 410 - Advanced Studies in Feminist Thought
WGS 425 - Feminist Organizations
WGS 436 - Feminist Rhetoric(s)
WGS 438 - Trans Genders and Sexualities
WGS 439 - Women, Gender and Violence in a Transnational Context

WGS 447 - Sexualities and Genders in World Teen Culture

WGS 452 - Feminism and Postcolonial Studies
WGS 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies
WGS 473 - Women, Rap and Hip-Hop Feminism
WGS 498 - Senior Project in Women's \& Gender Studies

WGS 500 - Selected Topics (if taught by core WGS faculty)

## Writing Minor

## Minor Coordinator

Martha K. Love, Writing Program Academic Coordinator
239 H.B. Crouse
315-443-1047
mklove@syr.edu
In addition to offering both a major and a minor, the Writing Program coordinates and facilitates writing instruction across the curriculum within the University. The goal of the Writing Program is to integrate writing with reading and critical thinking in all disciplines and to encourage continuing development of these abilities. The program cooperates with other units to help writers and teachers achieve these goals.
Syracuse University students usually take WRT 105 - Studio 1: Practices of Academic Writing and WRT 205 - Studio 2: Critical Research and Writing. Writing Studios 1 and 2 serve as pre-requisites for upper-division writing courses. WRT 205 maybe taken concurrently with WRT 255.
WRT 105-taken in the first semester of the first year-focuses on the study and practice of writing processes, including critical reading, collaboration, revision, editing, and the use of technologies. Academic writing-especially analysis and argumentation-is the focus.

WRT 205-normally taken in the spring of the second year-builds on the work of WRT 105 and the experiences of writing during the first year. Students study and practice critical, researchbased writing, including research methods, presentation of ideas and information, and source evaluation.

At the upper division, students may take advanced courses in civic, researched, digital, and professional writing, in style and editing, and in creative nonfiction, as well as study rhetoric and identity, information technologies, literacy, and the politics of language and writing.
The Writing Program is also home to The Writing Center (H.B.Crouse 101; 315-443-5289), a resource for all writers at Syracuse University. See our web site at wrt.syr.edu for more information.

## Minor in Writing Description

The minor in writing offers students the opportunity to develop expertise in writing for academic, professional, civic, and personal purposes. The coursework provides practice in writing in a range of genres, editing and style, publishing, and digital media. Courses also investigate rhetoric, information technology, the politics of language use, and language and identity.

## Requirements

The minor in writing is available to all undergraduates at Syracuse University. Students must have credit for WRT 105 and WRT 205, or equivalent. Students may begin the minor before completing WRT 205. The minor requires 18 credits:

WRT 255 - Advanced Argumentative Writing 15 WRT credits numbered 300 or above, excluding WRT 320. A list of these courses can be found on the Writing Program page under Major Requirements.

## Note:

At most, one approved non-WRT courses (3 credits) can be used toward the major. A list of these approved courses can be found on the Writing Program page under Major Requirements.

## Combined Degree

African American Studies Secondary Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in African American Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

Anthropology Secondary Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in Anthropology and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs,

## 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Biology Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Biology and Secondary Science Education (Biology) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Biology Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Biology and Secondary Science Education (Biology) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the
subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Chemistry Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Chemistry and Secondary Science Education (Chemistry) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Chemistry Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Chemistry and Secondary Science Education (Chemistry) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed
in order to articulate smoothly into the master's degree program.

## Earth Science Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Earth Science and Secondary Science Education (Earth Science) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Earth Science Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Earth Science and Secondary Science Education (Earth Science) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

Economics Secondary Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in

Economics and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Economics Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Economics and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## English and Textual Studies

 Secondary Teacher Preparation, BA/MSCombined Bachelor's/Master's Degrees in English and Textual Studies and Secondary (English) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Geography Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Geography and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## History Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in History and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education
master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## International Relations

Secondary Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in International Relations and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Latino-Latin American Studies Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in LatinoLatin American Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested
undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Mathematics Secondary Teacher Preparation, BA/MS <br> Combined Bachelor's/Master's Degrees in Mathematics and Secondary Education (Math) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Mathematics Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Mathematics and Secondary Education (Math) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

Physics Secondary Teacher<br>Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Physics and Secondary Science Education (Physics)
Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Physics Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Physics and Secondary Science Education (Physics)
Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Policy Studies Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Policy Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Political Science Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Political Science and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Sociology Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Sociology and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements
for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Women's and Gender Studies Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Women's and Gender Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Certificate

Iroquois Linguistics for
Language Learners Certificate

## Contact

Scott Manning Stevens, Director
314 Tolley Humanities Building
scsteven@syr.edu
315-443-8785

## Faculty

Percy Abrams

## Description

The Iroquois language family is a group of
distinct but closely related languages. Of these languages, six are spoken by the Haudenosaunee Confederacy: Mohawk, Oneida, Onondaga, Cayuga, Seneca, and Tuscarora. These languages share a common grammatical structure and cultural history. This certificate program will explore the commonalities and differences among the Iroquois languages.
The courses are designed for students and teachers of Iroquois languages, addressing many different needs. They provide an excellent foundation for Iroquois language students, teachers, linguists, anthropologists, and others. These courses will contribute to Iroquois language revitalization efforts and expand knowledge of the Iroquois languages.
The Certificate in Iroquois Linguistics provides a unique opportunity to study the linguistic principles and grammatical features that are unique to the Iroquois languages. This program also offers a unique opportunity to study Iroquois linguistics with rich examples from the six Haudenosaunee (Six Nations Iroquois Confederacy) languages.
Iroquois linguistics entails the study of a number of interacting grammatical systems within the Iroquois languages. The Certificate Iroquois Languages (CIL) sequence of courses will study all of the grammatical systems within the Iroquois Languages. The student will study the grammatical systems that the Iroquois languages have in common as well as the parts of the grammatical system which makes each of the Iroquois languages distinct.

The Iroquois verb is especially complex. It is imperative that someone who is learning or teaching an Iroquois language has a complete understanding of the grammatical systems that are interacting within the verb; to achieve fluency in an Iroquois language requires a full understanding of the grammatical systems. The Native Speakers of the Iroquois Languages acquire the grammatical systems naturally. In Iroquois Linguistics one seeks to model their knowledge.
A student in the Certificate in Iroquois Linguistics will also explore and learn to use the vast scholarly resources which are available to those who learn the linguistic terminology and concepts that are employed within these resources.

## Course Requirements

Fall:
NAT 301 - Iroquois Verb Morphology I
NAT 305 - Iroquois Phonetics and Phonology
Spring:
NAT 302 - Iroquois Verb Morphology II

NAT 306 - Iroquois Syntax and Semantics

## Summer:

NAT 308 - Iroquois Linguistics in Practice

## Medicolegal Death Investigation Certificate

## Contact:

Michael Sponsler, sponsler@syr.edu Professor of Chemistry, Director of Curricular Programs for the Forensic and National Security Sciences Institute at Syracuse University
1-014 Center Sci \& Tech
315-443-4880

## Faculty:

Michael Sponsler, sponsler@syr.edu 1-014 Center Sci \& Tech 315-443-4880

## Program Description:

The Certificate in Medicolegal Death Investigation is a 12 -credit program that offers instruction that can be tailored to a wide variety of professionals who may either directly or tangentially become involved in cases of deaths that require investigation. In addition to those in the medicolegal field, this includes primary responders (police officers, paramedics, etc.), coroners, funeral directors, and others who have not yet earned a bachelor's degree. Knowledge gained in this certificate will help these professionals to aid the investigation in death cases by preserving evidence, providing suitable documentation, and appropriately interacting with others at the scene or involved in the case. Thus, this certificate program will help these various people become more effective in their own professions as it intersects with death investigation.

## Admission:

The primary criterion for admission into this program will be employment in a position that potentially impacts the investigations in death cases, requiring the knowledge that this program offers.

## Requirements

## I. Gateway Course - 3 Credits Required

FSC 435 - Medicolegal Death Investigation I
FSC 436 - Medicolegal Death Investigation II

FSC 437 - Medicolegal Death Investigation for Emergency Responders

## II. Electives - 9 Credits Required <br> FSC 435 - Medicolegal Death Investigation I <br> FSC 436 - Medicolegal Death Investigation II <br> FSC 437 - Medicolegal Death Investigation for Emergency Responders

FSC 440 - Special Topics in Advanced Forensics (approved topics only*)
FSC 451 - Forensic Pathology
FSC 453 - Forensic Toxicology
FSC 462 - Forensic Entomology
FSC 463 - Bloodstain Pattern Analysis
FSC 467 - Forensic Photography
FSC 468 - Crime Scene Investigation
FSC 490 - Independent Study or
Internship in Forensic Science
Note:
*Relevant workshops will be run under FSC 440, and these will be identified as appropriate for use as electives in this program.

## Transfer Credit

Maximum of 3 credits

## Part-time Study

May be pursued

## Degree

Certificate in Medicolegal Death Investigation

## Total Credits: 12 (limit of 3 transfer credits)

## Asian/Asian American Studies

## AAA 101 - Introduction to Asian/AsianAmerican Studies

## College of Arts \& Sciences

3 credit(s) At least 1x fall or spring
Examines how cross border transactions in Asia and between Asia and the United States and Canada have shaped ideologies and politics, markets here and abroad, marriage, labor, personal, social, political and cultural identity.

## AAA 300 - Selected Topics <br> College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester. Repeatable

## AAA 307 - Asian Americans and Social Stratification

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 307
Designed to familiarize the student with major issues and potential controversies in the scholarly studies as well as public perceptions of Asian American experiences in education and work.

## African American Studies

## AAS 112 - Introduction to African <br> American Studies in Social Sciences

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: ANT 112
Historical and sociopolitical materials. Approaches to studying the African American experience, antecedents from African past, and special problems.

## AAS 138 - Writing About Black Culture

College of Arts and Sciences
3 credit(s) Every semester
Expository writing based on cogent analysis of African American literature, art, music, and history ideas.

## AAS 200 - Selected Topics

College of Arts and Sciences
$1-6$ credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## AAS 202 - Caribbean Society Since Independence

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Issues of self determination and emancipation in region. From the period of the invasions of explorers after the European renaissance to the present.

## AAS 206 - Introduction to African American Music

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Introduces students to the contributions and transformations made in the music that the enslaved African brought to the western hemisphere.

## AAS 207 - A Survey of African Music

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Survey music from Morocco to South Africa using diverse media to illuminate this vast area. The concentration will be on the lifestyle of the people who create music.

## AAS 231 - African American Literature to 1900: An Introduction

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
African American literature and folklore from colonial days to 1900. Autobiographies, fiction, and poetry, including works by Wheatley, Douglass, Jacobs, Brown, Webb, Hopkins, Dunbar, Chesnutt, Dubois, Johnson, Washington.

## AAS 232 - African American Lliterature: Twentieth and Twenty-First Centuries

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Survey of 20th and 21st Century African American literature (U.S. terrain). Emphasis on aesthetics, culture and politics of Black writers and writing: 1920's to present. Literary and cultural frameworks of analysis. Baldwin, Dandicat, Hurston, Morrison, Sanchez, Wilson and Wright.

## AAS 233 - The Caribbean Novel

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Fiction in English and translation by writers from Caribbean areas, and Brazil. Historical, social, and cultural factors. Representations and concepts of gender, home, and migration. Barrett, Conde, Hodge, James, Lamming, Marshall, Roumain.

## AAS 234 - African Fiction

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Fiction in English and translation by contemporary novelists from Africa. Thematic and conceptual approaches underscore the literary force of language and creativity. Social and literary dynamics of books and related films. Achebe, Adichie, Aidoo, Ba, Dadie, Diop, Head, Ngugi, Sembene.

## AAS 235 - African American Drama

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring African American drama from inception to present. Includes the works of playwrights such as Brown, Grimke, Hughes, Hansberry, Baldwin, Baraka, Ward, Fuller, and Wilson.

## AAS 241 - African Religions: An Introduction

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: REL 281
Historical and comparative study of religious practice in Africa. Diversity of traditional beliefs, developments in Christianity and Islam, and political significance of religious identity and practice. African influence on western religious practices.

## AAS 254 - Comparative Study of American Ethnic Communities

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: SOC 254
Variety of ethnic communities in American society. Comparative analysis of similarities and uniqueness. Issues of group conflict, diversity, and unity.

## AAS 290 - Independent Study

College of Arts and Sciences
1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## AAS 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## AAS 302 - Contemporary African American Theater

## College of Arts and Sciences

3 credit(s) Every semester
Themes, images, and aesthetics of contemporary African theater examined through works of contemporary Black playwrights, scholars, and critics. Includes behind-the-scenes study of an African American theater production.

## AAS 303 - Black Women Writers

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 303
Literature and scholarship by Black women writers. Analytical reading, writing and discussion of various topics, stylistic questions, strategies generated in autobiography, fiction, drama, poetry, speeches and scholarship: 1960's to present, and earlier times. Bambara, Davis, Hurston, Jones,

Lorde, Morrison, Williams.

## AAS 304 - Workshop:African American Theater

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
How text of play by Black writer is realized in an on stage production. Introduction to aspects of production (costuming, lighting, sound) and study of play selected and related materials. Production experience by work on full stage production.

## AAS 305 - African Orature

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Theory and practice of African orature. Exploration of ethics and aesthetics through study of main genres, selected texts, and film. Discourse on application and linkages with Caribbean and African American orature forms.

## AAS 306 - African American Politics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 306
Introduction to the African American experience in the American political system, from the colonial period to the present. Organization/leadership, federal institutions/relations, sociopolitical movements, and electoral politics.

## AAS 307 - African Women Writers

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: WGS 307
Literature in English and translation by African women writing from a variety of cultural stances and geographic locations in Africa, Europe and North America. Writing styles and creative modes of expression used by African women writers to convey and envision the life of their work. Adichie, Aidoo, Dangaremba, El Sadaawi, Liking, Mbye d'Ernville, Tadjo.

## AAS 309 - Race, Gender and Sexuality in the African Diaspora

College of Arts and Sciences
3 credit(s) Every semester Crosslisted with: SOC 309, WGS 309
To introduce students to the reality of how institutional racism informs the "common sense" understanding of what is known as Black sexuality.

## AAS 310 - Elements of Theater Production

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring A practical look at various steps of production, while accessing factors which contribute to successful theater.

Repeatable 1 time(s), 6 credits maximum

## AAS 312 - Pan Africanism

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Impact of Pan African thought and action in the 20th century. Focus on social movements and ideas reflected in the Pan African movement in the continent and the African diaspora.

## AAS 325 - Africa to 1800

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: HST 325
The first half of a two semester survey focusing on the evolution of African cultures and civilization in the traditional period. Topics: the emergence of man, migration of peoples, economic and social systems, state formation, the slave trade. Arabic influences and the early European settlement in South Africa.

AAS 326 - Africa Since 1800

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 326
Second half of the survey, studying Africa when it was affected by European peoples and cultures. Topics: penetration by European explorers and missionaries, imperialism and colonialism, African resistance and rebellion, nationalism and liberation, neocolonialism and other problems of independence.

## AAS 327 - History of Southern Africa

## College of Arts and Sciences

3 credit(s) Irregularly
Begins before arrival of Europeans in southern Africa. Economic, geographic, sociological, and political factors contributing to development of this unique, racially based modern state. Includes Afrikaaner diaspora, Euro-African conflict during the nineteenth century, Anglo-Boer War, from union to apartheid, and resistance to European domination.

## AAS 331 - The African American Novel: Twentieth and Twenty-First Centuries

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Novelists such as Hughes, Larsen, Hurston, Toomer, Wright, Baldwin, Ellison, Gaines, Morrison, Walker, Briscoe, and Clarke will be included. The place of these authors in African American fiction in particular and American fiction in general will be analyzed.

## AAS 332 - African American History: Through the 19th Century

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 332 Cultural, economic, political, and social developments shaping experiences of North Americans of African descent. Foundations of collective identity and diversity. African American historiography. Interpretive and methodological issues in historical practice.

## AAS 333 - African American History: After the 19th Century

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HST 333
Continuation of AAS/HST 332.

## AAS 338 - Creative Writing Workshop

College of Arts and Sciences
3 credit(s) Irregularly
Poetry and prose workshop. Students exposed to techniques of craftsmanship, use of meditation to expand the visionary experience, and aesthetic sensibilities that involve African American culture.

## AAS 341 - Politics of Africa

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: PSC 341
Historical foundations of the move towards political freedom, democracy and self rule in Africa. Dynamics of the political process.

## AAS 345 - African American Religious History

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: REL 345
Historical significance of religion for Americans of African descent. African and western forces shaping religious identity. Religious practices, beliefs, organizations, imagery, literature, theories, and activism. Historical perspectives on meanings of religion.

## AAS 346 - Comparative Third World Politics

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PSC 346
Examines thematically and comparatively the political systems of South America, Asia, and Africa, exploring topics such as colonization, decolonization, nation-building, the postcolonial state and its institutions, the recent wave of democratization, and the challenges of socioeconomic development.

## AAS 353 - Sociology of the African American Experience

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: SOC 353
Theory and research of African American sociologists in the historical, social, and political context of American sociology. Relation of their work to the African American experience and its reception and impact in the public policy arena.

## AAS 361 - Art of the Black World

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: HOA 386
Arts of the African Diaspora. Emphasis on African American Art. Seventeenth century to present. Gender, socioeconomic, political and cultural contexts. Artistic implications of Black culture in comparative perspective with other artists and artistic movements.

## AAS 364 - African International Relations

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 364
The place of Africans in the international system; specific issues emanating from the decolonization process. Issues of militarism, humanitarianism, peacekeeping, and genocide; challenges of globalization.

## AAS 365 - International Political Economy of the Third World

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: PSC 365
Political and economic problems developing countries face in international economic relations, attempts to solve them. Discusses the making of the international system, the "third world," globalization, trade, debt, multinational corporations, multilateral lending agencies (IMF, World Bank).

## AAS 367 - Protest Movements \& African American Artists:19th \& 20th Centuries <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Influences, trends, and social significance of selected visual art expressions and philosophies that were designed to re-inforce or effect social change for blacks from slavery to the present.

## AAS 380 - International Course

College of Arts and Sciences
1-12 credit(s)

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable 11 time(s), 12 credits maximum

## AAS 390 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth.
Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## AAS 400 - Selected Topics

College of Arts and Sciences
1-6 credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## AAS 402 - Slavery and Abolition

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: HST 402
Evolution and diverse character of North American slavery and antislavery. Slavery as labor, legal, and property system, cultural and political phenomenon, and social and economic network. Politics and ethics of abolition.

## AAS 403 - African and Caribbean Women Writers

## College of Arts and Sciences

3 credit(s)
Crosslisted with: WGS 403
Comparative approaches and trans-Atlantic analysis of literature by women writers from Africa and the Caribbean. Representations and constructions of social, political, and cultural life in colonial, neo-colonial, and contemporary contexts. Writers such as Ba, Brodber, Dangaremba, Marshall, Head, Dandicat, Nwapa.

## AAS 408 - Masters of American Black Music

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: AAS 608
Various masters of African American music and how these masters brought beauty and happiness to the common place.

## AAS 409 - History of Jazz, 1940 to Present

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: AAS 609
Determine why bebop was the most significant style development in the 20th century. How did it liberate the music from dance music to its own art form? Additional work required of graduate students.

## AAS 410 - Seminar on Social Change

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 410
Changes in African American communities or in the circumstances of African Americans within a particular institutional arena. Movements to promote change and obstacles to change. Substantive focus varies.
Repeatable

## AAS 412 - Hurricane Katrina: Race, Class, Gender \& Disaster

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Course explores the development of US Gulf Region to understand the disparate impacts of race, class, gender, and age inequalities resulting from Hurricane Katrina, the New Orleans levees breaches, and the 2010 BP Oil Spill.

## AAS 413 - There Goes the Neighborhood: US Residential Segregation

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 413
Chronicles patterns of racial residential segregation in the US by examining the methods that maintain racially distinct neighborhoods.
Explores link between segregation and education, social mobility, health, and mortality.

## AAS 416 - Race, Crime and Punishment

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Crosslisted with: SOC 416
The multiple and complex relationships between race, the power to punish, and crime control policies and practice. Exploration of the theories of crime and punishment from classic to postmodern.

## AAS 417 - Human Rights in the Americas

Crosslisted with: IRP 417
Advanced introductional to international human rights laws and frameworks with a focus on Latin American and Caribbean states.

## AAS 425 - "Revolt of the Black Athlete": Africana Studies and the History and Culture of Sport <br> College of Arts and Sciences <br> 3 credit(s) Every semester Double Numbered with: AAS 625

This seminar will examine the complex and varied Africana athletic experiences from the playing field to the coaching ranks and front office from a critical social justice perspective intersecting race, class, gender, and international relations. Additional work required of graduate students.

## AAS 426 - African American Urban History

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: HST 426
Double Numbered with: AAS 626
This seminar will examine the complex and varied Black urban experiences in the 20th and 21st centuries from the 1890s to the present.

## AAS 427 - New York City: Black Women Domestic Workers

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 427, WGS 427
Double Numbered with: AAS 627
Historical understanding of Black women's engagement in paid domestic work in the United States, increasing need for domestic workers in the ever-changing economy and family, and the social construction of Black women as "ideal" domestic workers.

## AAS 433 - Harlem

 Renaissance:Literature and Ideology
## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Literature, politics, and social transformations during the Harlem Renaissance and New Negro Movements. Selected writers, intellectuals and activists in relation to national and international spheres of history, creativity, influence, and experience in the U.S., Europe, African, and the Caribbean. Writers such as Ida B. Wells, DuBois, Damas, Garvey, Hughes, Nadal, West.

## AAS 434 - Underground Railroad

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: ANT 494, HST 434
Double Numbered with: AAS 634
Myth and history of the Underground in the
context of African American freedom efforts. Emphasis on events, personalities, and sites in upstate New York. Student field research and exploration of archival and Internet resources. Additional work required of graduate students.

## AAS 445 - The Caribbean: Sex Workers,

 Transnational Capital, and Tourism
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: SOC 445, WGS 445
Double Numbered with: AAS 645 A political economy approach to educating students about the human and capital costs of tourism to the Caribbean. The integral relationship between sex work and Caribbean tourism exposes the region's development that has resulted in its current configuration.

## AAS 465 - The Image of Blacks in Art and Film

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Examining images of African Americans in feature length films, beginning with the invention of the moving image to the present day. Comparisons with artistic images are grounded in gender, socioeconomic, political and cultural contexts.

## AAS 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Supervised internship with a local community agency.
Repeatable

## AAS 480 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## AAS 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## AAS 499 - Honors Capstone Project <br> College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable

## AAS 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Interdisciplinary seminar examining various areas of intellectual and research interests related to the American black experience. Integrates knowledge of historical, cultural, sociological, political, and economic issues. Prereq: lower-division course in the social sciences.
Repeatable

## AAS 501 - African American Sociological Practice:1900-45

## College of Arts and Sciences

3 credit(s) Irregularly
Intellectual traditions and histories of African American sociologists between 1900 and 1945. Understanding the nature of their contributions to various strands of American and Pan African social thought. Impacts on public policy.

## AAS 503 - Black Paris: Studies in Literature, Culture and Intellectual Life

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Baldwin, "Bricktop", Cesaire, Conde, Diop, Himes, and Wright. Jazz, Negritude, and Presence Africaine. Literature, films, concepts, and contemporary issues involving: expatriation, colonialism, racism, and immigration; and places such as the Café Tournon, Belleville, the Louvre, and University of Paris.

## AAS 510 - Studies in African American History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 510
Particular periods or aspects of African American history.
Repeatable

## AAS 512 - African American Women's History

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: WGS 512
The intellectual, political, and social history of African American women from pre-colonial Africa to the re-emergence of black feminism in the late 20th-century United States.

## AAS 513 - Toni Morrison: Black Book Seminar

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: WGS 513
A multi-dimensional study of Morrison's bookwork: fiction, non-fiction, and scholarship. Involves conceptual frameworks and ideas that link this project with broader understandings and interpretations of Blacks in the world. A wide range of questions (i.e., aesthetics, feminisms, knowing-politics, language, race) derives from Morrison's literary witnessing of Black community life.

## AAS 525 - Research Methods in African American Studies

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Conceptual, technical, and ethical tools for research among populations in the African Diaspora. Guidelines and practice in reviewing literature and assessing historiography data gathering and analysis, interviewing, participant observation, and archival research.

## AAS 540 - Seminar:African American

 Studies
## College of Arts and Sciences

$3-4$ credit(s) At least $1 x$ fall or spring Various areas of intellectual and research interests related to the American black experience. Integrates knowledge of historical, cultural, sociological, political, and economic issues. Repeatable

## AAS 580 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## AAS 590 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## Anthropology

## ANT 100 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ANT 111 - Introduction to Cultural Anthropology

## College of Arts and Sciences

3 credit(s) Every semester
Economics, politics, religion, symbolism, rites of passage, developmental cycle, and expressive culture. Required for Anthropology majors.

## ANT 112 - Introduction to African American Studies in Social Sciences <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Crosslisted with: AAS 112 <br> Historical and sociopolitical materials. Approaches to studying the African American experience, antecedents from African past, and special problems.

## ANT 121 - Peoples and Cultures of the World

## College of Arts and Sciences

3 credit(s) Every semester
Case studies of global cultural diversity. Exploration of daily life, rites of passage, marriage, family, work, politics, social life, religion, ritual, and art among foraging, agricultural, and industrial societies.

## ANT 131 - Introduction to Biological Anthropology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Biological anthropology subfields; anthropology's relationship to history of science. Evolutionary theory; mechanisms of evolution; survey of the non-human primates; humans ancestral to modern Homo sapiens; and modern human variation. Required for Anthropology majors.

## ANT 141 - Introduction to Archaeology and Prehistory

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Survey of the prehistoric past spanning the origins of humankind through the rise of complex societies. Class activities and field trips provide a hands on introduction to archaeological interpretation.

## ANT 145 - Introduction to Historical Archaeology

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: HST 145
Role of history and archaeology in our understanding of 17 th- to 19th-century Europe, Africa, and America. Historical archaeology as a mechanism to critique perceptions of the past. Firsthand record of ethnic groups and cultural settings not recorded in writing.

## ANT 185 - Global Encounters:Comparing World Views \& Values Cross-Culturally <br> College of Arts and Sciences 3 credit(s) At least 1x fall or spring Predominant views of reality and values in the cultures of Asia, Africa, and the Americas. Humanistic study of cultures and nature of crosscultural understanding.

## ANT 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ANT 202 - Languages of the World

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring Crosslisted with: LIN 202
Introduction to Universal Grammar. Similarities and differences in structures of human languages. Syntax and morphology. Theory development. PREREQ: LIN 201

## ANT 221 - Morality and Community <br> College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: REL 221
Examines how globally diverse religious groups create distinct moral systems in order to provide their members with the feeling of belonging to unique and meaningful communities.

## ANT 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## ANT 273 - Indigenous Religions

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: NAT 244, REL 244
The connections between material life and religious life in cultures throughout the world. The diverse ways that various cultures inhabit their landscapes.

## ANT 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## ANT 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ANT 311 - Anthropological Theory

College of Arts and Sciences
3 credit(s) Every semester
Anthropological theory focusing on debates about human nature, cultural and racial diversity, and the goals of anthropology as a discipline. Required for majors.

## ANT 318 - African Cultures

College of Arts and Sciences
3 credit(s) Irregularly
Selected contemporary African cultures. West Africa and the impact of the slave trade. Aspects of colonialism and neocolonialism and their relationship to current social and political development.

## ANT 322 - South American Cultures

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Crosslisted with: LAS 318
Archaeology and cultural history. Racial, linguistic, and cultural areas from 1492 to today. Studies of contemporary Indian and Mestizo populations.

## ANT 323 - Peoples and Cultures of North America

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: NAT 323
Racial, linguistic, and cultural areas of North America from the Rio Grande to the

Arctic. Selected areas and tribes. Data from archaeology, historical records, and contemporary anthropological fieldwork.

## ANT 324 - Modern South Asian Cultures

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: SAS 324, WGS 324
Societies of India, Pakistan, Bangladesh, and Sri Lanka. Social organization, economic and political structures, religions and world view, survey of languages, the arts. Transition and modernization, rural and urban problems.

## ANT 325 - Anthropology of American

 Life in FilmCollege of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Analysis of American culture using film and literature. Concept of "national character." Major cultural configurations and themes.

## ANT 326 - Africa Through the Novel

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 327
Cultural, political, and social life of Africa and Africans through African literature. Each semester deals with a motif (e.g., novels of Achebe).

## ANT 327 - Anthropology of Race in Latin America and the Caribbean <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> History of racial ideologies in Latin America and the Caribbean; interactions of racial ideologies with self concepts and life chances; racial ideologies' shaping of expressive culture and religion; antiracism movements and legislation; race and transnational migration.

## ANT 346 - Gender Through the Ages

College of Arts and Sciences
3 credit(s) Irregularly
The study of gender in archaeology from the late Stone Age to Modern era.

## ANT 348 - History of Archaeology

College of Arts and Sciences
3 credit(s) Irregularly
Tracing the discipline's origins with the Renaissance dilettante. Brief survey of scientific and quantitative methods.

## ANT 349 - Archaeology at the Movies:The Scientific Study of the Past in Popular Culture

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Introduction to modern archaeology and the scientific study of the past. Utilizing fictional portrayals of archaeological interpretation in popular culture the course examines some of the major research questions of modern anthropology.

## ANT 352 - Food, Culture and Identity

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in London. Introduction to a variety of critical approaches; questions about power and representation; role of food in construction of identity.
PREREQ: RENEE CROWN HONORS PROGRAM OR 3.4 MINIMUM GPA

## ANT 355 - Spanish Society and Pop Culture

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: SOC 345
Offered only in Madrid. Explores what is considered important, good, and fashionable in Spain today and how these values relate to historical developments as well as foreign influences.
PREREQ: SPA 201

## ANT 356 - Applied Anthropology

## College of Arts and Sciences

3 credit(s) Irregularly
Describes past and present uses of anthropology in social policy. Examines the discipline's role in addressing global issues such as economic development, environmental degradation, indigenous rights, refugees, and health care. Careers in nonacademic settings.

## ANT 357 - Health, Healing, and Culture <br> College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Cross-cultural perspective on illness, health, medicine, and the body; medical pluralism; biomedicalization; illness and moral reasoning; local and global political economies of health and healing; globalization and medicine. Applied medical anthropology.

## ANT 358 - Peace, War and Security

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Anthropology of peace, war and security examining the biological basis for war, archaeology of early warfare, effects of colonial expansion among indigenous peoples and
postcolonial society, contemporary peacekeeping, and humanitarian intervention.

## ANT 363 - Anthropology of Family Life

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 363
Historical and cross-cultural study of forms of family and domestic organization, marriage, status and sex roles, ideals, and customs of family life.

## ANT 365 - Sexual Attraction in Crosscultural Perspective

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Sexual attractiveness across cultures. Cultural differences as well as cultural universals.

## ANT 367 - Gender in a Globalizing World

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: GEO 367, WGS 367
Economic and cultural processes of globalization as they affect different groups of men, women, and households; including gender and work, development and environmental change, and redefinitions of masculinity and femininity across the globe.

## ANT 373 - Magic and Religion

College of Arts and Sciences
3 credit(s) Every semester
Crosscultural study of magical and religious behavior, ritual, and belief systems in simple and complex societies. Specialists and their craft: shamans, priests. Curing, possession, witchcraft. Millennial and counterculture movements. Religious ideologies and innovations.

## ANT 376 - Folklore

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Folklore as a cultural system expressing the value orientations of nonliterate, illiterate, and minority populations. Various genres of folklore (myth, song, art) and the folklore of several specific societies.

## ANT 377 - Quilts and Community

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5 Explores role of quilts and quilting communities. Discussion, films, exploration of quilts and their makers-and communities that result. Class learns quilt making process. No sewing experience required.

## ANT 380 - International Course

## College of Arts and Sciences

1-6 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## ANT 381 - Ancient Rituals and Beliefs in Modern Spain

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Offered only in Madrid. From Paleolithic and Neolithic settlements of the Iberian Peninsula to modern immigration into Spain, this course examines the complex layering of ancient belief systems in a modern country, using Spain as a laboratory.

## ANT 382 - Health in the Middle East

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HTW 382, MES 382
Surveys major cultural, biological and environmental features of the Middle East and relates them to aspects of health including infectious disease, chronic disease, reproductive health, population, war, poverty and globalization.

## ANT 390 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a problem, or problems, in depth.
Individual independent study upon a plan
submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## ANT 400 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester Repeatable

## ANT 402 - Ethnic History of Britain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 422
Offered only in London. Examines the ways in which migration has shaped and reworked British national identity over the past two thousand years through the study of original historical sources, literature, film and music, and explores the contributions that migrants have made to modern British society.

## ANT 403 - Culture, Confucianism and Chinese Modernity

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: HST 443
Offered only in Beijing. Contemporary China from historical and cultural perspectives. Exploration of political and ideological conflicts between China and the West. Patterns of Chinese culture. Impact of Confucianism on Chinese society and its influence outside of China

## ANT 404 - Family and Gender in Renaissance Italy

College of Arts and Sciences
3 credit(s)
Crosslisted with: HST 404, WGS 404
Historical and interdisciplinary exploration of life stages, rites of passage, marriage, family, social life, sodomy, prostitution, career options, and alternate life strategies as illustrated by case studies. Offered only in Florence.

## ANT 405 - Conservation and Management Protected Areas: South Africa-OTS

## College of Arts and Sciences

4 credit(s) Irregularly
Crosslisted with: GEO 405
Taught in South Africa through the Organization for Tropical Studies program. Analyze management of wildlife and natural resources within ecological, political, social, historical, and economic context of South Africa.

## ANT 406 - History and Culture of South Africa OTS

## College of Arts and Sciences

4 credit(s)
Taught in South Africa through OTS program. Human history of South Africa. Range of cultural, social aspects of current South African society. Origin and maintenance of cultural diversity of region, archaeological records, early migration patterns.

## ANT 407 - Environment and Policy in the Tropics OTS

## College of Arts and Sciences

4 credit(s)
Taught in Costa Rica through OTS program. Issues conservation biology and policy: habitat degradation and fragmentation, design of nature reserves, land-use planning, agro ecosystems, environmental economics, and conservation ethics.

ANT 408 - The Practice of Eros:A History of Sexuality in Europe (14001800)<br>College of Arts and Sciences<br>3 credit(s)<br>Crosslisted with: HST 408, WGS 408<br>Authorized and "alternative" sexuality in Europe 15th to 18th centuries (especially Italy, France, and England.) "Licit love" (courtship, marriage, conjugal relations) as opposed to "illicit unions" (adultery, rape, prostitution, bestiality, homosexuality, lesbianism). Offered only in Florence.

## ANT 409 - A History of Witchcraft

College of Arts and Sciences
3 credit(s)
Crosslisted with: HST 409, REL 409, WGS 409
History of witchcraft from various perspectives: its intellectual roots, the causes and dynamics of the witch-hunt, and the beliefs and self-perceptions of those who were called "witches". Offered only in Florence.

## ANT 414 - Cities, Spaces and Power

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 614
Processes of urbanization, migration, adjustments of peasants in cities, ethnic and cultural variation in urban areas. Cultural differences in industrial development. Uses of applied anthropology in urban situations. Sometimes offered abroad.

## ANT 415 - Culture \&Personality

## College of Arts and Sciences

3 credit(s) Irregularly
The person-in-culture and the function of culture in personality formation. Cross-cultural problems of child rearing, learning and education, life-cycle patterns, cultural conditioning, normality, and deviance. The individual and cultural milieu.

## ANT 416 - Political Anthropology

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 616
Social power in the global political economy. Coexistence of various emergent and residual social formations such as tribe, peasant, and state. Conflicts over identities in terms of nationality, gender, ethnicity, race and/or class. Additional work required of graduate students.

## ANT 417 - Economic Anthropology

## College of Arts and Sciences

3 credit(s) Irregularly
Survey of primitive modes of production: major adaptive strategies (collecting, hunting, horticulture, and pastoralism), division of labor,
and ecological influences impinging on these productive techniques.
PREREQ: ANT 111

## ANT 421 - Gender \& Sexuality in South Asia

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: SAS 421 Double Numbered with: ANT 621
Seminar examines gender and sexuality in South Asia through ethnographies and films. Topics explored relating to gender and sexuality include: colonialism; nationalism; development; globalization; kinship; the life cycle; caste and class; religion; same-sex/"third sex" identities. Additional work required of graduate students.

## ANT 422 - Etruscans and Romans: Ancient Art and Society in Italy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HOA 303
Explores art and society of ancient Italy from ca. 1000 B.C. to A.D. 138 , with special emphasis on the early Etruscans through Rome under Hadrian. Requires previous course in art history. Offered only in Florence.
PREREQ: ANY HOA 100-499

## ANT 424 - Negotiation: Theory and Practice

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: ANT 624
Negotiation skills for resolving differences effectively and achieving mutually satisfying outcomes. Position based versus interest based negotiation. Advanced techniques of communication such as chunking, reframing, anchoring, metaphor and rapport to obtain negotiation outcomes of excellence. Additional work required of graduate students.

## ANT 426 - Cultures and Politics of

 Afghanistan and Pakistan
## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: IRP 426, SAS 426
Double Numbered with: ANT 626
Introduction to Afghanistan and Pakistan, recent histories, cultures, current politics. Covers geography, religious systems, gender roles, economic systems, foreign policy issues, refugees, migration. Additional work required of graduate students.

## ANT 427 - Brazil: Anthropological Perspectives

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 627
History and culture of Brazil; indigenous populations; Afro-Brazilians; race and ethnic relations; development; kinship; gender; religion; urbanization; politics; nationalism; globalization. Additional work required of graduate students.

## ANT 428 - Transformation of Eastern Europe

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 629
Change and continuity after the demise of communism as experienced by ordinary citizens. Transformations in agriculture, industry, social, and political institutions; the rise of ethnic nationalism; and ethnic conflict. Additional work required of graduate students.

## ANT 429 - Cultures of the Iberian Peninsula

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Taught in Spanish. A general cultural introduction to the peoples who populated Spain and Portugal. Emphasis on those living in the Iberian peninsula before Roman and Carthaginian settlement and their influence on future generations. Field study tours to archeological and historic sites. Offered only in Madrid.

## ANT 431 - Human Variation

College of Arts and Sciences
3 credit(s) Irregularly
Genetics as applied by anthropologists to humans. Description of the genetic systems most commonly studied. Descriptions of polygenic, polymorphic mvariations and the methods by which theya re gathered.

## ANT 433 - Human Osteology

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 633
This course is an intensive study of the human skeletal system. The focus is identification of fragmentary skeletal elements and their osseous structure, skills relevant to archaeological and forensic contexts. Laboratory practicum forms the basis.

## ANT 434 - Anthropology of Death

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 634
Death in anthropological perspective. Survey of
the many ways death has entered into the work of archaeologists, biological anthropologists, ethnographers and social theorists.

## ANT 436 - Bioarchaeology

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 636
Surveys the analysis of human skeletal remains in archaeological and medico-legal settings. Methods and techniques of analysis and interpretation will be emphasized. Case studies will be used to illustrate application to variable social and historical contexts. Additional work required of graduate students.

## ANT 442 - Methods in Archaeology

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 642
Formulation and conduct of archaeological research with a focus on field and laboratory methods used to obtain and analyze data. Survey techniques, excavation strategies, archaeological classification, and data base management. Additional work required of graduate students. PREREQ: ANT 141 OR ANT 145

## ANT 443 - Field Methods in Archaeology

## College of Arts and Sciences

6 credit(s) Only during the summer Supervised training in the excavation of archaeological sites, including analysis, cataloging and accessioning of artifacts. Repeatable

## ANT 444 - Laboratory Analysis in Archaeology

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 644
Introduction to archaeo-logical materials analysis, artifact-classification systems, processing of data, materials analyses (ceramic, lithic, etc.). Conservation and curation of collections. Extra work required of graduate students.
PREREQ: ANT 141 OR ANT 145

## ANT 445 - Public Policy and Archaeology

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: NAT 445
Double Numbered with: ANT 645
Proactive critique of public policy and implementation efforts to preserve and protect archaeological and historical sites and resources. Additional work required of graduate students.

## ANT 446 - Caribbean Archaeology

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: ANT 646
Caribbean archaeology from the region's early prehistory through the historic period. Cultural diversity, indigenous societies, Hispanic and colonial impacts, and the African Diaspora.

## ANT 447 - Archaeology of North America

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 447
Double Numbered with: ANT 647
Introduction to the regional prehistory of North America north of Mexico, from the late Pleistocene until European contact. Adaptation of prehistoric human populations to their ecosystems. Additional work required of graduate students. PREREQ: ANT 141 OR ANT 145

## ANT 449 - World Heritage Sites

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 649
A seminar exploring global perspectives on UNESCO World Heritage Sites. Review of laws and policies aimed at protecting cultural and natural sites that have been defined as universally significant. Includes evaluation and critique of policies and practices. Additional work required of graduate students.

## ANT 450 - Undergrad Research Prog

## College of Arts and Sciences

1-6 credit(s) Every semester
Repeatable

## ANT 452 - Anthropology and Public Policy

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 652
Cultural aspects of the development and implementation of public policy. Emphasizing decision making methodologies and ethnographic studies of the consequences of implemented policies. Additional work required of graduate students.

## ANT 453 - Poverty, Policy, and Human Services

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 653
National programs and local interventions that address poverty related social conditions in Syracuse and Onondaga county. Field study of current policies and practices in government
and in health, education, and human services agencies. Additional work required of graduate students.

## ANT 455 - Culture and AIDS

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 455
Double Numbered with: ANT 655
Relationship between AIDS and cultures in which it spreads. Cultural practices and sexuality and social effects of widespread AIDS, including healthcare in Asia, Africa, Latin America, and USA. Additional work required of graduate students.

## ANT 456 - Representations of Indigenous Peoples in Popular Culture

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 456
Double Numbered with: ANT 656
Contested images used by colonizers and other non-indigenous people to represent Native Americans and other indigenous peoples. How indigenous people represent themselves in a variety of media. Additional work required of graduate students.

## ANT 458 - Anthropology of Social Change

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Introduces the basic concepts used by anthropologists to study change. Cultural heterogeneity of people of the Iberian peninsula, used as a means to understand social and cultural change in contemporary Spain and Portugal. Some themes examined include culture contact and acculturation, planned and nondirected change, and role of individual. Offered only in Madrid.

## ANT 459 - Contemporary Native North American Issues

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 459
Double Numbered with: ANT 659
Contemporary issues including federal Indian policy, population controls, fishing rights, religious freedom, land disputes, gaming, repatriation, environmental colonialism, and Native American artistic response. Additional work required of graduate students.

## ANT 461 - Museums and Native Americans

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: NAT 461

Double Numbered with: ANT 661
The contested relationships among Native North Americans and museums from earliest contact until the present. Topics include: "salvage" ethnography, collecting practices, exhibition, and recent shifts in power. Additional work required of graduate students.

## ANT 462 - Culture and Reproductive Health and Medicine

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: HTW 462, WGS 462
Double Numbered with: ANT 662
Cultural anthropological approaches to crosscultural variations in reproductive practices (pregnancy, childbirth, infertility, etc.) Impact of globalization, biomedicalization, international development on reproduction and reproductive health. Medical anthropology and gender studies.

## ANT 463 - Global Health

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: HTW 463
Double Numbered with: ANT 663
Global health in anthropological perspective.
Examines how culture affects people's experience and response to morbidity and mortality. Considers topics like gender and health, reproductive health, infectious disease, health and inequality and health and war.

## ANT 465 - Critical Issues in Medical Anthropology

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 665
Illness and healing in ecological and crosscultural perspectives; strengths and weaknesses of Western and non-Western methods of healing; problems of introducing Western medicine to other cultures. Additional work required of graduate students.

## ANT 466 - Culture and Sexual Behavior

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 666
Cross-cultural patterns of dating and court-ship, sexuality, marriage, fertility, and divorce from biosocial and medical perspectives. Additional work required of graduate students.

## ANT 467-Culture and Mental Disorders

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 667
Mental disorders viewed as illnesses or social
constructions. Cross-cultural variation and universals. Western and non-Western methods of treatment. Additional work required of graduate students.

## ANT 468 - Middle East in Anthropological Perspective

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: IRP 468, MES 468
Double Numbered with: ANT 668
Anthropology of the social, cultural, geographical, and political realities of the Middle East.
Additional work required of graduate students.

## ANT 469 - Medical Anthropology in Ecological Perspective

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 669
Interaction of biological and cultural factors in disease causation, diagnosis, and treatment in Western and non-Western societies. Introducing Western medicine to non-Western cultures.
Additional work required of graduate students.

## ANT 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## ANT 471 - Religion and Society in Brazil

## College of Arts and Sciences

3-4 credit(s) Irregularly
Crosslisted with: REL 471
Role of religion in society; religions of Brazil, including Catholicism, liberation theology, afroreligions. Spring break field stay in Rio de Janeiro; methods of study; preparation of research proposal.

## ANT 472 - Language, Culture, and Society

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: LIN 472,WGS 472
Double Numbered with: ANT 672
Cross-cultural survey of the role of language in culture and society, including cognition and language usage along the dimensions of class, gender, race, ethnicity, and social status.

## ANT 473 - Peace and Conflict in the Balkans: Anthropological Perspectives

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 673
Introduction to Balkan histories, cultures, and societies. Topics include ethnic nationalism, the wars of Yugoslav dissolution, effects of international humanitarian interventions on everyday life, and politics of reconciliation and reconstruction. Additional work required of graduate students.

## ANT 475 - Culture and Disputing

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 675
Explores modalities of disputing, dispute resolution, and conflict management in crosscultural perspective. Decision making in meetings and organizations, negotiation, mediation, intercultural negotiation, and third party interventions. Ethnographic materials are drawn from many cultures. Additional work required of graduate students.

## ANT 476 - Women, War and Peace

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: ANT 676 Examines global politics, war and violence through a gender-sensitive lens. The topics include human trafficking, prostitution, militarization, poverty, nationalism, ethnic conflict, war-rapes, torture, genocide, reconciliation and recovery. Additional work required of graduate students.

## ANT 477 - Culture and Conflict

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: ANT 677
An overview of conflict in cross-cultural perspective. Covers a variety of approaches to using cultural analysis in the study of conflict and reviews case studies of specific conflicts. Additional work required of graduate students.

## ANT 479 - Anthropology of Global Transformations

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 679
Impact of global processes, including industrialization, capitalist expansion, transnational migration, environmental change, and international tourism on the daily lives of men and women in Third World contexts. Additional work required of graduate students.

## ANT 481 - Ethnographic Techniques

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 681
Research methods and techniques in cultural anthropology. Participant observation, interviewing, establishing rapport, research design, recording and analyzing field data, etc.

## ANT 482 - Life Histories/Narratives

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 682
Evaluation of personal narratives (fieldwork memoirs, reflexive writings), oral histories and testimonials of respondents, a means of personalizing ethnographic discourse, giving more direct voice to respondents, and increasing multivocality. Issues of reflexivity, subjectivity, authority. Additional work required of graduate students.

## ANT 483 - Social Movement Theory

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: ANT 683
Theoretical approaches to analysis of social movements including Marxist and other Utopian traditions of social analysis, rational choice and resource mobilization models, new social movement theory, and Gramscian analysis of power and resistance. Additional work required of graduate students.

## ANT 484 - Social Movement Research Methods

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: ANT 684
A range of research methodologies relevant to the study of social movements. Stimulates critical thinking about these methodologies' ethical implications. Students develop proposals for projects carried out the following semester.

## ANT 490 - Independent Study

College of Arts and Sciences
1-6 credit(s) Every semester
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## ANT 494 - Underground Railroad

College of Arts and Sciences
3 credit(s) Upon sufficient interest
Crosslisted with: AAS 434, HST 434
Double Numbered with: ANT 694
Myth and history of the Underground in the
context of African American freedom efforts. Emphasis on events, personalities, and sites in upstate New York. Student field research and exploration of archival and Internet resources. Additional work required of graduate students.

## ANT 495 - Research for Distinction in Anthropology

## College of Arts and Sciences

3 credit(s) Every semester
Research and background study in preparation to write a capstone ‘Distinction’ paper. The project will involve significant library and/or field work under faculty supervision. GPA requirement and faculty approvals needed.

## ANT 496 - Distinction in Anthropology

## College of Arts and Sciences

3 credit(s) Every semester
Distinction paper: Advanced research under the supervision of a faculty supervisor. The capstone "Distinction in Anthropology" paper involves significant library and/or field work. GPA requirement and faculty approvals needed.

## ANT 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## ANT 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ANT 523 - Globalization and its Discontents in Latin America

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: LAS 523
Effects of and reactions to globalization and neoliberal policies in rural communities, including industrialization, rural-urban and international migration and ethnic movements.

## ANT 553 - Women and Social Change

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: WGS 553
Function of changes in women's roles in sociocultural urbanization, revolution, and modernization. Women in Third World countries compared to women in industrialized countries.

## ANT 571 - Topics in Sociolinguistics

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: LIN 571, SOC 571
Functions of language in society. Geographical, socioeconomic, and male-female differentiation. Functions of various types of speech events.
Requirements include a research project.
Repeatable 1 time(s), 6 credits maximum

## ANT 574 - Anthropology and Physical Design

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Interrelationship of social and spatial organization in traditional and modern societies. Nonverbal communication: use of space, territoriality, and impact of physical design on human behavior.

## Arabic

## ARB 101 - Arabic I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Arabic. Students cannot enroll in ARB 101 after earning credit for ARB 102, ARB 201, or ARB 202 or higher.

## ARB 102 - Arabic II

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course, which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Arabic. Students cannot enroll in ARB 102 after earning credit for ARB 201, ARB 202 or higher. PREREQ: ARB 101

## ARB 201 - Arabic III

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course, which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Arabic. Students cannot enroll in ARB 201 after earning credit for ARB 202 or higher.
PREREQ: ARB 102

## ARB 202 - Arabic IV

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course, which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading,
discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Arabic. Students cannot enroll in ARB 202 after earning credit for a course higher than ARB 202.
PREREQ: ARB 201

## ARB 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## ARB 301 - Arabic V

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Continuing proficiency-based Arabic language course which focuses on more advanced levels of proficiency in reading, speaking, writing, and listening.
PREREQ: ARB 202

## ARB 302 - Arabic VI

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Continuing proficiency-based Arabic language course which focuses on more advanced levels of proficiency in reading, speaking, writing, and listening.
PREREQ: ARB 301

## ARB 336 - Arabic Cultures

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: LIT 336, MES 336
Arabic culture through geography, literature, religion (Islam and other religions), ethnic groups, social divisions, films, the media, music, art, food, gender issues, and everyday life.

## ARB 426 - Structure of Standard Arabic

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LIN 426
Structure of Standard Arabic, including the phonology, morphology, syntax, and semantics. Includes social and historical issues related to the development of the Arabic language. Additional work required of graduate students.

## ARB 480 - International Course

College of Arts and Sciences
1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution
and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable

## Astronomy

## AST 101-Our Corner of the Universe

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Historical and modern understanding of the nature of the solar system. Includes laboratory with observations. May be taken with AST 104 in either order or independently.

## AST 104 - Stars,Galaxies \& Universe

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Historical and modern understanding of the nature of the universe beyond the solar system. Includes laboratory with observations. May be taken with AST 101 in either order, or independently.

## AST 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Biochemistry

## BCM 430 - Journal Club in Molecular Pharmacology \& Structural Biology

## College of Arts and Sciences

1 credit(s) At least 1x fall or spring
Double Numbered with: BCM 630
Critical evaluation of recent journal articles that focus on molecular pharmacology and/or structural biology. Students make at least one presentation per semester and participate in weekly discussion. Additional work required of graduate students.
Repeatable 1 time(s), 2 credits maximum

## BCM 460 - Research in Biochemistry

## College of Arts and Sciences

1-3 credit(s) Every semester
Research carried out under the supervision of a faculty member.
Repeatable 3 time(s), 12 credits maximum

## BCM 475 - Biochemistry I

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: BCM 675
Structure and function of nucleic acids and proteins. Protein isolation and characterization. Enzyme kinetics, mechanisms, and regulation. Principles and application of thermodynamic concepts to metabolism. DNA replication, transcription, and translation. Students enrolled in 675 will be required to present a special topic lecture or complete a research paper.
PREREQ: CHE 325

## BCM 476 - Biochemistry II

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: BCM 676 Continuation of Biochemistry I. Mechanisms, integration, and regulation of intermediary, autotrophic, nitrogen, and energy metabolism. Structure, function, and metabolism of carbohydrates, lipids, and proteins. Biogenesis and function of subcellular organelles. Students enrolled in 676 will be required to present a special topic lecture or write a research paper. PREREQ: BCM 475

## BCM 477 - Proteins and Nucleic Acids Lab

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CHE 477
Double Numbered with: BCM 677
Experimental methods for biologically synthesizing and chemically purifying macromolecules in order to analyze their structure and function, including: polymerase chain reaction; site-directed mutagenesis; Protein expression and purification; nucleic acid and protein electrophoresis. Additional work required of graduate students. PREREQ: BIO 305 AND (BIO 326 OR BCM 475 OR CHE 474)

## BCM 480 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## BCM 484 - Biomolecular Modeling

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: BCM 684

Experience in biomolecular modeling of proteins, nucleic acids, and drug candidates as practiced in biochemical research and technology. Connections with structural and physical principles will be emphasized. Additional work required of graduate students.
PREREQ: CHE 474

## BCM 495 - Distinction Thesis in Biochemistry

College of Arts and Sciences
1 credit(s) Every semester
Students preparing a thesis in partial fulfillment of the requirements for the Distinction in Biochemistry Program must enroll in this course in the semester prior to graduation.

## BCM 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Biology

## BIO 105-Technology Inspired by Nature-Learning from the Natural World

## College of Arts and Sciences

3 credit(s) Irregularly
Investigations into how human technology has been and can be inspired by nature. Research process; production of novel adhesives, building materials, fabrics; solar power, biofuels, aerodynamics, computer design, artificial intelligence, and robotics.

## BIO 106-Ocean Life

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8 An introduction to the biology of the diverse organisms that live in the ocean, applications of cutting edge technology to their study, recent scientific discoveries, and the science behind current global conservation issues.

## BIO 115 - Ecological Problems and Society

College of Arts and Sciences
3 credit(s) Irregularly
Current and anticipated ecological problems of societal importance and the basic scientific principles required for informed understanding and assessment of these issues by the nonscientist.

## BIO 121 - General Biology I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
First course in a survey of biological concepts ranging from the molecular level to global ecology. Units include the nature of science, life chemistry, cell structure and function, photosynthesis and respiration, genetics, and evolution.

## BIO 123 - General Biology II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Second course in a survey of major biological concepts ranging from the molecular level to global ecology. Units include biodiversity, plant structure and function, human and comparative animal anatomy and function, ecology, and evolution.

## BIO 124 - General Biology II Laboratory

## College of Arts and Sciences

1 credit(s) At least 1x fall or spring Laboratory course associated with BIO 123. Includes inquiry-based exploration and practical application of concepts discussed in BIO 123. One laboratory session per week. Includes inquirybased exploration and practical application of concepts discussed in BIO 123.
COREQ: BIO 123

## BIO 180 - International Course

## College of Arts and Sciences

## 1-12 credit(s)

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## BIO 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BIO 211 - Introduction to Neuroscience

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: NEU 211
Foundations of neurobiology beginning with cellular neurobiology, moving on to integrative systems and ending with higher brain functions. Emphasizes understanding of nervous system operation. Lectures, discussion and demonstrations.

## BIO 216 - Anatomy \& Physiology I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Lecture and laboratory course relating form and function. Structure and function of tissues, bones, joints, muscle, nervous system, and special senses. Biology majors may not receive credit toward the major. Credit cannot be given to for BIO 216 after successfully completing BIO 316. PREREQ: BIO 121 AND BIO 123 AND BIO 124

## BIO 217 - Anatomy and Physiology II

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Lecture and laboratory course, continuation of BIO 216, relating form and function. Structure and function of urinary, digestive, endocrine, reproductive, and cardiovascular systems. Biology majors may not receive credit toward the major. Credit cannot be given for BIO 217 after successfully completing BIO 317. PREREQ: BIO 121 AND BIO 123 AND BIO 124

## BIO 220 - Biology Abroad

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Examination of specific biological problems offered in, or with a specific focus on, a particular international setting. Combination of lectures and appropriate laboratory and field exercises. Repeatable

## BIO 305 - Integrative Biology

 Laboratory
## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Provides students with early laboratory experience, presenting a quantitative, integrated view of subcellular, cellular, developmental, organismal, and ecosystem/environmental perspectives on biology.
PREREQ: BIO 121 AND (BIO 326 OR BIO 327 OR BIO 345)

## BIO 307-South African Ecosystems and Diversity OTS

## College of Arts and Sciences

4 credit(s) Irregularly
Taught in South Africa through OTS program. Field and classroom instruction, integrated analysis of diversity of South Africa's ecosystems based on sources in geology, climatology, ecosystem ecology, co-evolution of plants and animals; roles of humans.

## BIO 310 - Evolutionary Biology,

 Religion \& SocietyCollege of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
This seminar format course will examine
evolutionary biology and its intersection with society. Topics of discussion will include evolution and philosophy, history, medicine, environmental issues, politics, education and religion.

## BIO 311 - Fundamentals of Tropical Biology-Costa Rica OTS

## College of Arts and Sciences

4 credit(s) Irregularly
Taught in Costa Rica through OTS program. Integrates classroom and field instruction; fundamental principle of tropical biology; the natural history of important plants, animals; major conceptual problems guiding basic ecological research in tropical habitats.

## BIO 312 - Marine Ecology of the Mediterranean Sea and North Africa

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Offered only in Madrid. Marine ecosystems and their components and how they behave alone and in interaction. Observe and analyze conservation issues such as problems resulting from excessive use of resources, including renewable and nonrenewable natural resources and the deterioration and loss of both.

## BIO 313 - Marine Ecology Laboratory

College of Arts and Sciences
1 credit(s) Every semester
Hands-on study of the Neritic Biome in the Canary Islands.
COREQ: BIO 312

## BIO 316 - Anatomy and Physiology I for Biology Majors

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Lecture and laboratory course relating form and function. Structure and function of tissues, bones, joints, muscle, nervous system, and special senses. Credit cannot be given for BIO 316 after successful completion of BIO 216.
PREREQ: BIO 121

## BIO 317 - Anatomy and Physiology II for Biology Majors

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Lecture and laboratory course, relating form and function. Structure and function of urinary, digestive, endocrine, reproductive, and cardiovascular systems. Credit cannot be given for BIO 317 after successful completion of BIO 217. PREREQ: BIO 121

## BIO 326 - Genetics

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring

Principles of inheritance, structure and synthesis of nucleic acids and proteins, basic enzymology, microbial genetics, recombinant DNA technology and introduction to genomics.
PREREQ: BIO 121 AND CHE 106 OR CHE 109 OR CHE 150

## BIO 327 - Cell Biology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Cell structure, molecular biology of eukaryotic cells, cytoskeletal organization and function, cell division cycle, membrane structure and function, cell-cell interactions, cell differentiation and regulation.
PREREQ: (BIO 121 OR BEN 301) AND CHE 106

## BIO 345 - Ecology and Evolution

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Survey of modern topics in ecology and evolutionary biology. Evolution, phylogenetics, animal behavior, population ecology, community ecology and ecosystems
PREREQ: BIO 121

## BIO 355 - General Physiology

## College of Arts and Sciences

3 credit(s) Every semester
Physiology of systems of higher animals and plants, including circulation, regulation of body fluids, nervous system, muscle, sensory systems, and photosynthesis.
PREREQ: BIO 121 AND (CHE 106 OR CHE 109 OR CHE 150)

## BIO 360 - Biology Laboratory Assistant

## College of Arts and Sciences

1 credit(s) Every semester
Students who have completed BIO 425, 435, 445 or 455 may receive one credit hour for assisting in the teaching of these laboratories. This opportunity is especially appropriate for students considering teaching careers. Invitation of instructor.
Repeatable 1 time(s), 2 credits maximum

## BIO 396 - Stem Cells and Society

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 396, REL 359
The science of stem cells and the philosophical, religious and legal complexities surrounding the research and use of stem cell technologies.

## BIO 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester. * Repeatable

## BIO 405 - Introduction to Field Biology Laboratory

## College of Arts and Sciences

4 credit(s) Irregularly
Scientific methods and design. Intensive field research conducted during spring break at the Archbold Biological Station in Florida. Design, implement, analyze own research projects. Travel to ecosystems discussed in lecture.
PREREQ: BIO 121

## BIO 406 - Field Research in Savanna Ecology-OTS

## College of Arts and Sciences

4 credit(s) Upon sufficient interest Taught in South Africa through OTS program. Research design, field methods, basic data analysis in context of South African ecosystems.

## BIO 407 - Advanced Neuroscience

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: NEU 407
Double Numbered with: BIO 607
Detailed analysis of the anatomy, physiology, and chemistry of the nervous system and behaviors that it mediates. Topics include: neurons and electrochemical properties of neurons, sensory and motor systems, homeostasis, sleep, consciousness, learning, and memory. Additional work required of graduate students.
PREREQ: BIO 211 OR PSY 223

## BIO 409-General Microbiology

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Micro- organisms and life processes. Microbial world. Microorganisms and human disease. Microorganisms and the environment. Lecture and laboratory.
PREREQ: BIO 326 AND BIO 327

## BIO 411 - Evolutionary Mechanisms

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: BIO 611 Core processes \& mechanisms involved in evolution, extending to molecular evolution, evolutionary genetics, \& genomics. Topics include: genetic variation, mutation \& neutral evolution, selection, drift \& inbreeding, quantitative genetics, molecular evolution, selection in the wild, adaptation, \& speciation. Additional work required of graduate students.
PREREQ: BIO 326 AND 345

## BIO 412 - Research Methods in Tropical Biology-OTS

## College of Arts and Sciences

4 credit(s) Upon sufficient interest Taught in Costa Rica through OTS program. Research design, field methods, basic data analysis in a tropic context. Hypothesis testing and statistical analysis. Design, implement, and analyze own field projects.

## BIO 414 - Biology of Adaptive Behaviors

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: BIO 614 Behavioral adaptations give animals the ability to use their pasts to solve new problems, an ability important to their survival. This course will examine behavioral plasticity and the brain mechanisms responsible for adaptive changes inn behavior. Additional work required of graduate students.
PREREQ: BIO 326 OR 327 OR 355

## BIO 415 - Conservation Biology

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: BIO 615 Considered from the standpoint of modern molecular, genetic, and population biology. Biodiversity, minimum viable populations, reserve design, genetic variation, applications of recombinant DNA technology, ex situ, care and ecosystem reconstruction. Additional work required of graduate students.
PREREQ: BIO 345

## BIO 416 - Biology of Aging

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Double Numbered with: BIO 616 Reviews and discusses current topics on biology of aging emphasizing distinctions between healthy and pathological aging. Primary focus will be on molecular, cellular, systems-level and whole organism changes accompanying aging. Additional work required of graduate students. Additional work required of graduate students.
PREREQ: BIO 327 OR 355

## BIO 417 - Animal Behavior and Evolutionary Biology Laboratory

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Focuses on understanding the process of natural selection, with an emphasis on the evolution of adaptive animal behavior. Planned lab and field exercises, independent research projects. Suitable for junior and senior biology majors. COREQ: BIO 345

## BIO 419 - Junior and Senior Thesis Seminar

## College of Arts and Sciences

1 credit(s) Every semester
Discussion of research activities of major interest to the participants. Open only to students admitted to the upper-division biology honors program. May be taken for credit up to four times. Repeatable 3 time(s), 4 credits maximum

## BIO 421 - Seminar in Biology

## College of Arts and Sciences

3 credit(s) Every semester
Junior/ senior level elective provides students the opportunity to read and analyze one area of the primary biological literature in depth. Analysis will take the form of papers, seminar presentations, and discussion of material presented during seminars.

## BIO 422 - Bioinformatics for Life Scientists

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Bioinformatics and how to apply it to biological research. As a lab course emphasis will be on the hands-on use of bioinformatics tools to solve relevant biological problems.
PREREQ: BIO 326

## BIO 425 - Cell and Developmental Biology Laboratory

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Survey of current methods employed in cell and developmental biology, including microscopy and imaging techniques, spatial analysis of gene expression, protein expression and localization, cell fractionation, and immunocytochemistry. Review general laboratory methods, data analysis, reporting.
PREREQ: BIO 326 AND BIO 327

## BIO 428 - Capstone Seminar in Environmental Science

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: EAR 428
Seminar for students following the environmental science curriculum. Students will work together to critically evaluate, and propose solutions to, current environmental problems using a combination of reading, class discussion, written analyses, and oral presentations.

## BIO 435 - Genetics Laboratory

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Students will gain experience in genetic methods
and analyses using various model organisms, such as budding yeast, fruit flies, nematodes, and mustard plants. Experiments will include gene mapping, phenotypic analysis, transformation, complementation, and an introduction to molecular biology.
PREREQ: BIO 326

## BIO 437 - Seminar in Developmental Neuroscience

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: BIO 637
Seminar course designed to enable students to develop \& practice skills in critical analysis as applied to reading primary scientific literature, covering some of the general principles of how a functioning nervous system is made in developing animals. Additional work required of graduate students.
PREREQ: BIO 326 AND 327

## BIO 439 - Seminar in Ecosystem Ecology

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: BIO 639
Examines the main drivers ¿ climate, biodiversity, trophic structure - of energy and nutrient flows through terrestrial and aquatic ecosystems by exploring reviews and the primary research literature. Additional work required of graduate students.
PREREQ: BIO 345

## BIO 441 - Seminar in Infectious Diseases

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Double Numbered with: BIO 641
Seminar focusing on human diseases caused by infectious agents such as viruses and bacteria. Cause (agent), contagion, symptoms, treatment \& potential outcomes will be discussed. Lectures \& review of patient case studies. Additional work required of graduate students.

## BIO 442 - Seminar in Model Organism Genetics

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Double Numbered with: BIO 642
Literature review of research papers using model genetic systems to investigate topics including animal and plant development, cancer, neurological disease, behavior, and aging. Additional work is required of graduate students. PREREQ: BIO 326 AND 327

## BIO 443 - Seminar in Epigenetics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: BIO 643
Seminar covering how epigenetic (gene expression inherited without change in DNA sequence)
mechanisms regulate gene expression for proper
development of organisms, including how they regulate health \& behavior of animals due to environmental stimuli. Additional work is required of graduate students.
PREREQ: BIO 326 AND 327

## BIO 444 - Seminar in Neurotoxicology

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: BIO 644
Examination of the mechanisms and consequences of toxicity of poisons in the central and peripheral nervous systems with a focus on the primary research literature. Additional work is required of graduate students.
PREREQ: BIO 211

## BIO 447 - Basic Immunology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Natural and adaptive humoral and cellular immunity. Immunoglobulin structure, generation of diversity, isotopes. Antigen recognition and processing. Complement pathways. Immune quantitation. Leucocyte differentiation. Interleukins. T-cell receptor structures and generation of diversity. Major histocompatibility complex proteins.
PREREQ: BIO 326 AND BIO 327

## BIO 448 - Evolutionary Medicine

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Application of evolutionary principles to prevention and treatment of human disease. Evolution of antibiotic resistance, epidemiology, virulence, population genetics, germ theory of disease, aging, human evolution. Lectures and discussion.
PREREQ: BIO 121
COREQ: BIO 345

## BIO 451 - Ecology

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: BIO 651
Integrated approach to animals and plants in their natural environments; evolutionary ecology and the ecology of populations, communities, and ecosystems. Aspects of applied ecology: pollution and human population growth. Additional work required of graduate students.
PREREQ: BIO 345

## BIO 453 - Ecology Laboratory

## College of Arts and Sciences

2 credit(s) Irregularly
Combines field trips to natural locations in upstate New York with laboratory studies to show how organisms interact with each other and their natural surroundings. Animal and plant ecology. PREREQ: BIO 345

## BIO 456 - Seminar in Human Disease Genomics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: BIO 656
Introduces students to influential genomic studies of the etiology \& epidemiology of human disease. Recent insights into the genetic basis of human adaptation \& its potential relevance to disease predisposition will be discussed. Additional work required of graduate students.
PREREQ: BIO 326 AND 327

## BIO 457 - Principles of Human Toxicology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: FSC 457
Double Numbered with: BIO 657
This course examines key aspects of human toxicology, including dose-response relationships, absorption, distribution, biotransformation, elimination, toxicokinetics, molecular mechanisms of toxicity, pesticides, metals, and toxic responses in specific organ systems. Additional work required of graduate students.
PREREQ: BIO 327 AND CHE 275 AND MAT 285

## BIO 458 - Seminar in Animal Communication

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: BIO 658
Fundamental principles underlying how and why animals communicate with each other. Examination of the behavioral role of signaling, the conflicts that arise when senders and receivers have differing interests, and the behavioral strategies that result from these conflicts. Additional work required of graduate students. PREREQ: BIO 345

## BIO 459 - Plants \& People

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Double Numbered with: BIO 659 Focus on plant biology, the role of plants in the environment and society, and current topics surrounding plants and people. Additional work is required of graduate students.
PREREQ: BIO 121

## BIO 460 - Research in Biology

## College of Arts and Sciences

1-4 credit(s) Every semester Laboratory or field research under direct supervision of biology department faculty. Projects incorporate use of the scientific method, experimentation, data analysis, presentation and interpretation, and the responsibilities of scientific integrity.
Repeatable

## BIO 461 - Experience in Biology

College of Arts and Sciences
0 credit(s) Every semester
Internship or work experience supervised by a faculty mentor. Projects may include experimentation, data analysis, presentation, and responsibilities of scientific integrity. Development and analysis of business plans or intellectual property in biotechnology focused companies, agencies or law firms is also possible.
Repeatable 5 time(s)

## BIO 462 - Molecular Genetics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: BIO 662
An introduction to gene and genome functions, mechanisms of gene regulation, epigenetics and the molecular basis of human disease. An emphasis will be placed on genomic, transcriptomic and epigenomic systems level approaches to these topics. Additional work required of graduate students.
PREREQ: BIO 326 AND BIO 327

## BIO 463 - Molecular Biotechnology

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Double Numbered with: BIO 663 Introduction to the molecular and genetic principles and processes involved in biotechnology. Labs will cover many of the methods routinely used in biotechnology labs. Additional work required of graduate students.
PREREQ: BIO 326 AND BIO 327

## BIO 464 - Applied Biotechnology

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring
Double Numbered with: BIO 664
Introduction to the scientific background necessary for applying tools of biotechnology for improvement of animal and human health, agriculture and environment. Labs will cover methods used in biotech industry and academia. Additional work required of graduate students. PREREQ: BIO 326 AND BIO 327

## BIO 465 - Molecular Biology Laboratory

College of Arts and Sciences
3 credit(s) Every semester
Double Numbered with: BIO 665
Basic experimental techniques: isolation of DNA, restriction endonuclease cleavage of DNA, cloning of DNA, isolation of clones from DNA libraries, in vitro mutagenesis and other techniques to manipulate nucleic acids. Additional work required of graduate students.
PREREQ: BIO 326 AND BIO 327

## BIO 469 - Science of Countering <br> Weapons of Mass Destruction

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: FSC 469
Double Numbered with: BIO 669 Scientific basis and means for countering WMDs, including biological systems. Protective measures, proven doctrines, practical questions, and problem solving. Additional work required of graduate students.

## BIO 472 - Advanced Light Microscopy

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: FSC 472
Double Numbered with: BIO 672
Theory and practice of modern light microscopy, including the fundamentals of image formation and applications in the biological and biomedical sciences, including reviews of microscopy methods and analog and digital image capture. Additional work required of graduate students. PREREQ: BIO 327

## BIO 475 - Biochemistry Laboratory

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Double Numbered with: BIO 675
Experiments on amino acids, proteins, enzymes, fatty acids and nucleic acids, illustrating modern biochemical techniques applied to the chemistry of living cells. Titrations; electrophoresis; gel filtration; kinetics; spectrophotometric assays; cellular fractionation and analysis. Additional work required of graduate students.
PREREQ: BIO 326 AND BIO 327
COREQ: BCM 475

## BIO 476 - Cold Cases

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: FSC 476
Double Numbered with: BIO 676
Methods and practice in solving unsolved cases using fundamental science, court documents, and other sources of information. Will include work on
real cases. Additional work required of graduate students.

## BIO 495 - Distinction Thesis in Biology

## College of Arts and Sciences

1-3 credit(s) Every semester
For students preparing a thesis in partial
fulfillment of the requirements for the Distinction in Biology Program. It normally will be taken by Distinction students in the semester prior to graduation.

## BIO 496 - Neuroscience and Society

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: PSY 496
Capstone course offered by the College of Arts \& Sciences for the Integrated Neuroscience major. Learn how to translate your knowledge in neuroscience from laboratory bench to neurological patients' bedside and help problems in society. Permission of instructor.
PREREQ: BIO 211 OR PSY 223

## BIO 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## BIO 501 - Biology of Cancer

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Classifications and model systems in cancer. Oncogenes; viral and chemical oncogenesis. Growth control, genetic and epigenetic changes, progression, invasion, metastasis, and tumor immunobiology. Cancer biochemistry, host-tumor interactions, chemotherapy, immunotherapy, and host-response modification.
PREREQ: BIO 326 AND BIO 327

## BIO 503 - Developmental Biology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Regulation of form and differentiation in eucaryotic organisms. Control of development at the molecular, cellular, and organismal levels. Experimental approaches to provide an understanding of developmental processes. PREREQ: BIO 326 AND BIO 327

## BIO 565 - Cellular Physiology

## College of Arts and Sciences

3 credit(s) Irregularly
A lecture course on basic problems of cell function, including energetics, membrane transport, contractility, and properties of excitable membranes.

# College of Arts and Sciences 

## CAS 101 - First Year Forum

College of Arts and Sciences
1 credit(s) Every semester
An introduction to the University in small discussion sections. Required of all first semester Arts and Sciences students. Diverse topics. Relevant reading and writing with discussions led by College of Arts and Sciences faculty members.

## CAS 102 - Summer Start Seminar

## College of Arts and Sciences

1 credit(s) At least 1 x fall or spring Critical thinking, leadership, study, and time management skills; high school to college transition issues; academic policies and university resources.

## CAS 133 - Introduction to the History of Architecture I

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ARC 133
Themes, concepts, and problems in architectural history from ancient Egypt to 1500. Required for architecture majors.

## CAS 134 - Introduction to the History of Architecture II

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARC 134
Themes, concepts, and problems in architectural history from 1500 to the present. Required for architecture majors.

## CAS 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## CAS 201 - Transfer Forum

## College of Arts and Sciences

1 credit(s) Every semester Introduction to the University in small discussion sections for students transferring into Syracuse University in Arts and Sciences. Diverse topics. Relevant reading, writing with discussions

## CAS 280 - International Course

College of Arts and Sciences
1-12 credit(s) Irregularly Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## CAS 311 - Living in a Global Environment

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Analysis of practical and theoretical components in living and interacting with people of different countries and cultures.

## CAS 411 - Living in a Global Environment

## College of Arts and Sciences

1 credit(s) At least 1x fall or spring Double Numbered with: CAS 611
Analysis of practical and theoretical components in living and interacting with people of different countries and cultures. Additional work required of graduate students.

## Chemistry

## CHE 103-Chemistry in the Modern World

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring Basic concepts and principles of chemistry. Applications of chemistry to problems in the modern world. Will not satisfy prerequisite requirements for advanced courses in chemistry. (First in a sequence, to be followed by CHE 113.)

CHE 106 - General Chemistry Lecture I

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Fundamental principles and laws underlying chemical action, states of matter, atomic and molecular structure, chemical bonding, stoichiometry, properties of solutions, chemical equilibria, and introductory thermochemistry. Credit is given for CHE 106 or 109 or CHE 150 but not more than one of these.
COREQ: CHE 107

## CHE 107-General Chemistry Laboratory I

## College of Arts and Sciences

1 credit(s) At least 1 x fall or spring
Experimental study of basic principles and
techniques of chemistry. States of matter, determination of formulas and molecular weights, simple volumetric and gravimetric analysis, heats of reaction. Equilibrium, rates of reactions, and qualitative analysis. Credit is given for CHE 107 or 129 or CHE 151 but not more than one of these. COREQ: CHE 106 OR CHE 109

## CHE 109-General Chemistry Lecture I (Honors and Majors)

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring General chemistry for students in the Honors Program, chemistry majors, and others with strong science interests. Quantitative, physical, and inorganic chemistry; applications in current research. Credit is given for CHE 106 or 109 or 150 , but not more than one of these.

## CHE 113 - Forensic Science

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Introduction to forensic science with focus upon the application of scientific methods and techniques to criminal justice and law. Methods specifically relevant to crime detection and analysis will be presented. Laboratory included.

## CHE 116 - General Chemistry Lecture II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Builds upon the fundamental chemical principles learned in CHE 106 and introduces chemical kinetics and thermodynamics, intermolecular forces, advanced chemical equilibria, oxidation/ reduction, and modern materials. Credit is given for CHE 116 or CHE 119, but not both.
PREREQ: CHE 106 OR CHE 109 OR AP CHEM EXAM SCORE MIN 5
COREQ: CHE 117

## CHE 117-General Chemistry Laboratory II

## College of Arts and Sciences

1 credit(s) At least $1 x$ fall or spring
Noncovalent chemistry, understanding symmetry and chirality, empirical and rational aspects of thermodynamics of dissolving salts equilibrium of buffers and solubility and redox potentials, separation and identification of metal cations.
Credit given for CHE 117 or 139 but not both.
PREREQ: CHE 107 OR CHE 129 OR AP CHEM EXAM SCORE MIN 5
COREQ: CHE 116 OR CHE 119 OR AP CHEM
EXAM SCORE MIN 5

## CHE 119 - General Chemistry Lecture II (Honors and Majors)

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring For students in the Honors Program, chemistry majors and others with strong science interests. Builds upon the fundamental chemical principles learned in CHE 109. Credit is given for CHE 116 or 119, but not both.
PREREQ: CHE 106 OR CHE 109 OR AP CHEM EXAM SCORE MIN 5

## CHE 129 - General Chemistry Laboratory I (Honors and Majors)

## College of Arts and Sciences

1 credit(s) At least $1 x$ fall or spring For Honors, Chemistry majors and others with strong science interests. Introduction to chemical laboratory techniques. Application of modern chemical apparatus and experiments relevant to environmental chemistry. Credit is given for CHE 107 or CHE 129, but not both. COREQ: CHE 106 OR CHE 109 OR AP CHEM EXAM SCORE MIN 5

## CHE 139 - General Chemistry Laboratory II (Honors and Majors)

## College of Arts and Sciences

1 credit(s) At least $1 x$ fall or spring Introduction to basic and advanced chemical laboratory techniques. Preparation for individual research. Idea development and proposal design. Data analysis and oral presentation skills. Credit is given for CHE 117 or CHE 139, but not both. PREREQ: CHE 107 OR CHE 129 OR AP CHEM EXAM SCORE MIN 5
COREQ: CHE 116 OR CHE 119 OR AP CHEM EXAM SCORE MIN 5

## CHE 150 - General Chemistry for Engineers

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Designed for engineering students needing only a single semester of chemistry. Focus on fundamental principles and laws underlying states of matter, nomenclature, periodicity, chemical reactions, stoichiometry, equilibrium, thermodynamics, materials properties and electrochemistry. Prepares students for the common section of the NCEES Fundamentals of Engineering exam. Credit is given for CHE 150 or CHE 106 or CHE 109, but not more than one of these.

## CHE 275-Organic Chemistry I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Chemistry of carbon compounds, their nomenclature, structure, stereochemistry, and
properties. Introduction to organic reactions and mechanisms.
PREREQ: CHE 116 OR CHE 119 OR AP CHEM EXAM SCORE MIN 5

## CHE 276-Organic Chemistry I Laboratory

## College of Arts and Sciences

2 credit(s) At least $1 x$ fall or spring Laboratory to accompany CHE 275. Experiments illustrate modern laboratory techniques in organic chemistry, with an emphasis on basic separations, purifications, and analysis of experimental data. Introduction to organic synthesis. PREREQ: CHE 117 OR CHE 139 OR AP CHEM EXAM SCORE MIN 5
COREQ: CHE 275

## CHE 280 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## CHE 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CHE 325-Organic Chemistry II

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Continuation of CHE 275. Emphasis on reaction and mechanism in organic chemistry, multi-step synthesis, and structural analysis.
PREREQ: CHE 275

## CHE 326-Organic Chemistry II Laboratory

## College of Arts and Sciences

2 credit(s) At least $1 x$ fall or spring Laboratory to accompany CHE 325. Further development of organic laboratory skills and techniques. Experiments illustrate principles of organic reactions and structure determination. PREREQ: CHE 276
COREQ: CHE 325

## CHE 335 - Chemical and Biochemical Analysis with Laboratory

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Lecture and laboratory on the theory of quantitative analysis and instrumental techniques and their application to the investigation of chemical and biochemical problems. PREREQ: (CHE 116 OR CHE 119 OR AP CHEM EXAM SCORE MIN 5) AND (CHE 117 OR CHE 139 OR AP CHEM EXAM SCORE MIN 5)

## CHE 346 - Physical Chemistry

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Properties of gases, liquids, and solids.
Elementary thermodynamics and chemical applications. Chemical and phase equilibrium. Laws of solutions.
PREREQ: (CHE 116 OR CHE 119 OR AP CHEM
EXAM SCORE MIN 5) AND (MAT 286 OR MAT 296)
COREQ: PHY 212

## CHE 347 - Physical-Analytical Chem Lab

College of Arts and Sciences
2 credit(s) At least 1x fall or spring Foundation of experimental techniques in physical and analytical chemistry. Introduction to instrument design, simple electronics, and error analysis. Construction of a pH meter, computer simulation of Maxwell distribution, and additional experiments focusing on basic concepts.
PREREQ: CHE 275 AND CHE 276
COREQ: CHE 346

## CHE 356 - Physical Chemistry

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Electrochemistry. Introduction to quantum mechanics, molecular structure spectra. Basic statistical mechanics. Chemical kinetics and structure of condensed phases.
PREREQ: CHE 346

## CHE 357 - Physical Chemistry Laboratory

## College of Arts and Sciences

2 credit(s) At least $1 x$ fall or spring Reinforcement of basic principles taught in CHE 347 by completion of well-selected, modern physical chemistry experiments.
PREREQ: CHE 347
COREQ: CHE 356

## CHE 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester. Repeatable

## CHE 411 - Inorganic Chemistry

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CHE 611
Descriptive and structural inorganic chemistry and underlying principles.
PREREQ: CHE 116 OR CHE 119 OR AP CHEM
EXAM SCORE MIN 5

## CHE 412 - Metals in Medicine

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: CHE 612 Bonding, stereochemistry, and properties of metallo-drugs and diagnostic agents. Topics include platinum compounds for treating cancer, gadolinium and technetium in biomedical imaging, and porphyrins in photo-dynamic therapy. Additional work required of graduate students. PREREQ: CHE 474

## CHE 414 - Introduction to Medicinal Chemistry

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: CHE 614 The fundamental principles of medicinal chemistry focusing on design and synthesis of pharmaceuticals. Structural elucidation, and physical-chemical properties of pharmaceutical drug candidates will be presented. Additional work required of graduate students.
PREREQ: CHE 325

## CHE 422 - Inorganic Laboratory

## Technique

## College of Arts and Sciences

1 credit(s) At least 1 x fall or spring
Double Numbered with: CHE 622
Basic experimental techniques used in inorganic chemistry.
PREREQ: CHE 411

## CHE 427-Organic Chemistry of Biological Molecules

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: CHE 627 Structure, reactivity, synthesis and biosynthesis of compounds constituting the building blocks of biological macromolecules. The role of biological molecules as templates for stereoselective organic synthesis to introduce advanced topics in stereochemistry, spectroscopy and mechanistic analysis of complex organic reactions.
PREREQ: CHE 325

## CHE 436 - Advanced Physical Chemistry

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CHE 636
Applications of thermodynamics and quantum mechanics to chemical bonding, molecular properties, chemical kinetics, structure of matter, spectroscopy.
PREREQ: CHE 356

## CHE 444 - Forensic Chemical Analysis

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Crosslisted with: FSC 444
Lecture content, delivered online, and laboratory on analytical methods of forensic chemistry. Underlying theory and direct experience in various chemical tests and spectroscopic methods. Additional work required of graduate students. PREREQ: (CHE 116 OR CHE 119 OR AP CHEM EXAM SCORE MIN 5) AND (CHE 117 OR CHE 139 OR AP CHEM EXAM SCORE MIN 5)

## CHE 450 - Introduction to Chemical Research

## College of Arts and Sciences

1-4 credit(s) Every semester
Research problem carried out under the supervision of a faculty member. Repeatable 6 time(s), 16 credits maximum

## CHE 467 - Introduction to Physical Chemistry Research Laboratory

## College of Arts and Sciences

3 credit(s) Irregularly
Research on well-focused projects which will be supervised by physical chemistry faculty. PREREQ: CHE 357

## CHE 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## CHE 474 - Structural and Physical Biochemistry

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CHE 674
Thermodynamics, kinetics, and bonding associated with biological molecules. The course also utilizes computerbased molecular modeling tools for analyzing the structures of drugs, proteins, and nucleic acids. Additional work
required of graduate students.
PREREQ: CHE 325

## CHE 477 - Proteins and Nucleic Acids Lab

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: BCM 477
Double Numbered with: CHE 677
Experimental methods for biologically synthesizing and chemically purifying macromolecules in order to analyze their structure and function, including: polymerase chain reaction; site-directed mutagenesis; Protein expression and purification; nucleic acid and protein electrophoresis. Additional work required of graduate students.
PREREQ: CHE 474 OR BIO 326 OR BIO 575

## CHE 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CHE 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## CHE 546 - Molecular Spectroscopy and Structure

## College of Arts and Sciences

1-9 credit(s) At least $1 x$ fall or spring For the nonspecialist. Three topics each semester, chosen from the list below. Students may register for one, two, or three modules. 546M Atomic Spectroscopy and Angular Momentum 1; 546M Laser Chemistry and Spectroscopy 1; 546M Symmetry and Group Theory 1; 546M Electronic Spectroscopy 1; 546M Nuclear Magnetic Resonance Spectroscopy 1; 546M Vibrational Spectroscopy 1; 546M Laser Applications of Molecular Spectroscopy 1
PREREQ: CHE 356
Repeatable 5 time(s), 12 credits maximum

## CHE 575-Organic Spectroscopy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Use of mass spectrometry and infrared, ultraviolet-visible, and nuclear magnetic resonance spectroscopy.
PREREQ: CHE 325

## Chinese

## CHI 101 - Chinese I

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Chinese. No prior experience or admission by placement testing. Students cannot enroll in CHI 101 after earning credit for CHI 102, CHI 201, CHI 202 or higher.

## CHI 102 - Chinese II

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Chinese. Students cannot enroll in CHI 102 after earning credit for CHI 201, CHI 202, or higher. PREREQ: CHI 101

## CHI 201 - Chinese III

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Chinese. Students cannot enroll in CHI 201 after earning credit for CHI 202 or higher. PREREQ: CHI 102

## CHI 202-Chinese IV

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a bases for the expression and interpretation of meaning. Conducted in Chinese. Students cannot enroll in CHI 202 after earning credit for a course higher than CHI 202.
PREREQ: CHI 201

## CHI 301 - Chinese V

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Fifth in the sequence of continuing proficiencybased courses that refine and expand previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Chinese. PREREQ: CHI 202

## CHI 302 - Chinese VI

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Sixth in the sequence of continuing proficiency-
based courses that refine and expand previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Chinese. PREREQ: CHI 301

## CHI 400 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CHI 401 - Advanced Chinese III

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Communicative Chinese for advanced learners. Emphasis on development and solidification of communicative ability and competence in paragraph-level composition and expression.

## CHI 402 - Advanced Chinese IV

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
A continuation of CHI 401. Communicative Chinese for advanced learners. Further development and solidification of communicative ability in paragraph-level composition and expression.

## Classics

## CLA 421 - Classical Mythology

College of Arts and Sciences
3 credit(s)
Crosslisted with: LIT 421, REL 421
Myths and rituals of Greek mythology and religion. Ancient poets/playwrights and important mythological themes found in later Western religious/artistic traditions. Offered only in Florence.

## Cognitive Science

## COG 100 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## COG 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## COG 301 - Introduction to Cognitive Science

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: NEU 301
Concepts and methods in the study and explanation of cognition. Knowledge that underlies such abilities as vision, language use, and problem solving. How it is represented and used. Comparison of methods in different disciplines studying cognition.

## COG 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## Communication Sciences and Disorders

## CSD 212 - Introduction to

## Communication Sciences and Disorders

## College of Arts and Sciences

3 credit(s) Every semester
Application of biology, physics, anatomy, physiology, and cognitive psychology to processes of speech, language, and hearing. Nature of disruptions to normal communication and scientific principles of prevention, diagnosis, and remediation. Cannot receive credit for both CSD 212 and CSD 303.

## CSD 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CSD 303-Communication in the Classroom

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Survey of development of oral communication and disorders that may interfere with effective communication and affect school performance. Emphasis upon collaboration between teachers and speech/language pathologists in describing and facilitating children's communication.

## CSD 315 - Anatomy and Physiology of the Speech and Hearing Mechanisms

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 615
Structure and function of the skeletal, neurological, and muscular systems involved in breathing, phonation, resonance, articulation, and hearing. Additional work is required of graduate students.
PREREQ: CSD 212

## CSD 316 - Introduction to Applied Phonetics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CSD 616
Anatomical structures and processes involved in speech production. Phonetic transcription of speech of adults, normally developing children, and children with speech disorders. Acoustic phonetics, phonology, and dialects. Additional work required of graduate students.

## CSD 325 - Fundamentals of Hearing Sciences

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Introductory anatomy, physiology, and function of the normal auditory system. Introduction to the physics of sound and psychoacoustic principles. PREREQ: CSD 212

## CSD 345 - Speech Science

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: CSD 645
Scientific principles involved in normal speech production across all speech subsystems.
Properties of the acoustic waveform, including acoustic phonetics for vowels and consonants. Basic speech instrumentation used to measure respiratory, phonatory, velopharyngeal/nasal, and pharyngeal/oral components. Theories of speech perception. Additional work required of graduate students.
PREREQ: CSD 212

## CSD 409 - Cognitive Neuroscience of Speech and Language

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: NEU 409
Double Numbered with: CSD 609
Neuroanatomical and neurophysiological aspects of speech and language. Role of central and peripheral nervous system in normal speech and language activities.Additional work required of graduate students.

## CSD 422 - Development of Speech and

 Language
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CSD 622
Theories and research on children's acquisition of communication, syntax, semantics, pragmatics, morphology, and phonology. Relationships between oral and written language skills in comprehension and production processing; individual differences; cognitive, social, biological, familial, and cultural influences. Additional work required of graduate students.

## CSD 425 - Stuttering

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 625
Theories of onset, development, and maintenance of disfluent speech; differentiation of normal vs. stuttered disfluencies; approaches to assessment and intervention across age range, settings, and severity levels; familial considerations, counseling, and environmental modifications; individualizing intervention. Additional work required of graduate students.
PREREQ: CSD 316 AND CSD 422

## CSD 427 - Articulation Disorders

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: CSD 627 Overview of normal articulation and development. Characteristics and description of articulation disorders. Incidence, etiology, related factors. Differences versus disorders. Principles of assessment, types of diagnostic instruments. Elements involved in therapy, various approaches to remediation. Additional work required of graduate students.
PREREQ: CSD 316

## CSD 429 - Basic Clinical Audiology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: CSD 629
Fundamentals of psychophysics of audition, anatomy, and physiology of the auditory mechanism. Disorders of hearing. Pure tone and speech audiometry. Differential diagnosis. Special procedures for children. Public school audiometry. Auditory rehabilitation. Additional work required of graduate students.

## CSD 435 - Aural Rehabilitation

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: CSD 635
Study of the management of children and adults with hearing impairments, with emphasis on the
development and maintenance of functional communication through amplification, auditory training, speechreading, manual communication, and speech and language intervention. Additional work required of graduate students.

## CSD 446 - Augmentative and Alternative Communication Systems

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: CSD 646
Philosophical, theoretical, and practical issues in enhancing communication for individuals with severe disabilities. Assistive technologies, identification and evaluation of systems to meet needs of children and adults. Teaching system use in family, school, community settings. Additional work required of graduate students.

## CSD 450 - Clinical/Classroom Practicum

## College of Arts and Sciences

1 credit(s) Every semester
Supervised practicum in clinic, hospital, early intervention, or school setting. Includes planning, staffing, implementation, modification, and outcomes assessment of evaluation and intervention procedures with clients and their families; professional issues addressed in regular seminar meetings. Permission of instructor.
PREREQ: CSD 422
COREQ: CSD 451
Repeatable 14 time(s), 15 credits maximum

## CSD 451 - Clinical Methods in SpeechLanguage Pathology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CSD 651
Introduces beginning clinicians to the therapeutic process ; professional expectations, the diagnosis process, general therapy considerations, therapy intervention techniques, evidence-based practice, and evaluation of the intervention process.
Additional work required of graduate students. PREREQ: CSD 422

## CSD 477 - Speech-Language Pathology in School Settings

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 677
Historical, legislative, administrative aspects of speech-language pathology school programming. Services delivery models; classroom management; collaborative assessment; and teaching, adapting, and implementing IEPs; social, cultural, linguistic, family, and community factors; rights and responsibilities in programming. Additional work required of graduate students. PREREQ: CSD 451

## CSD 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## World Language Program: Danish

DAN 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable, 12 credits maximum

## Earth Sciences

## EAR 104 - Introductory Geology Lab

College of Arts and Sciences
1 credit(s) Every semester Laboratory course designed for declared Earth science majors who entered the major by taking EAR105 instead of EAR110. Equivalent to the lab portion of EAR110. Credit will not be given for both EAR110 and EAR104.
PREREQ: EAR 105

## EAR 105 - Earth Science

## College of Arts and Sciences

3 credit(s) Every semester
Scientific study of our planet, its history, and the processes that shape it and affect humans. Emphasis includes tectonics, continental surfaces, and climate. Lecture and recitation, no laboratory; no prerequisite. Intended for non-majors. Students may receive credit for either EAR 110 (formerly EAR 101) or 105 but not both.

## EAR 106 - Geohazards \& Natural Disasters

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Investigation of Earth processes that create geohazards, such as earthquakes, volcanic eruptions, floods, climate change, and environmental contamination, and how specific research can inform policy and decision-making to mitigate their impact on humans.

## EAR 110 - Dynamic Earth

College of Arts and Sciences
4 credit(s) Every semester

Chemical, physical and biological processes and principles affecting the history and development of the Earth. Lectures, laboratory, and field trips. Students may not receive credit for both EAR110, EAR101, and 105. Recommended for majors.

## EAR 111 - Climate Change Past and Present

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Introduction to the science of climate change from the geological record of the last century. Major drivers of global climate, measuring change, and forecasting future climate. Role of human activities in present climate.

## EAR 117 - Oceanography

College of Arts and Sciences
3 credit(s) Every semester
A comprehensive introduction to the geology, physics, chemistry, and biology of the world ocean and its impact on global climate and environmental concerns.

## EAR 203 - Earth System Science

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring An integrated view of interactions among Earth's systems (lithosphere, biosphere, hydrosphere, atmosphere) and the timescales over which they operate. Topics covered in this course include: plate tectonics, atmospheric circulation, oceanic circulation, the greenhouse effect, the carbon cycle, the origin of the earth and life, and climate.

## EAR 205 - Water and Our Environment

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Investigates origin, occurrence, chemistry and hydrology of water on earth. Includes climate change, contamination and water supply issues within context of water sustainability.

## EAR 210 - History of Earth and Life

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Major transitions in the surface environments of our planet and the life that occupies them over the last 4.5 billion years. Evolutionary radiations, mass extinctions, climate change, plate tectonics, mountain building. Lectures, labs, field trip. PREREQ: EAR 101 OR EAR 110 OR EAR 203 OR (EAR 104 AND EAR 105)

## EAR 225 - Volcanoes and Earthquakes

## College of Arts and Sciences

3 credit(s) Every semester
Examination of the geologic nature of volcanoes and earthquakes as they are related to plate tectonic activity in the Earth. Discussion of related
societal hazards.

## EAR 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EAR 305 - Earth Science of Energy

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Science of energy in the 21st century, from an Earth Science perspective: Climatology of wind/solar energy; Hydrocarbons-conventional/ unconventional resources; Geothermal power; Geology of Uranium; Oceanography of tidal power; Hydroelectric power; Ocean/Lake Source Cooling. PREREQ: EAR 110 OR EAR 105 OR EAR 106 OR EAR 111 OR EAR 117 OR EAR 203

## EAR 309 - Honor Tutorial Geology

## College of Arts and Sciences

1-6 credit(s) Every semester
Selected topics under guidance of senior staff members. Open only to students in the Honors Program.

## EAR 311 - Introduction to Geophysical Methods

## College of Arts and Sciences

3 credit(s) Upon sufficient interest An introduction to the study of the Earth's near surface using geophysical methods and quantitative data analysis, specifically: seismic reflection and refraction, gravity, magnetic, electrical and electromagnetic methods. Participation in geophysical field survey is required.

## EAR 314 - Mineralogy

College of Arts and Sciences
4 credit(s) At least 1 x fall or spring Introduction to the distribution of minerals within the Earth, mineral properties (crystallography, crystal chemistry and structure), and the processes that form them. Methods used to identify minerals in hand specimens and an introduction to the techniques of optical mineralogy. Lecture, laboratory and fieldtrips.
PREREQ: EAR 110 OR EAR 203 OR (EAR
104 AND EAR 105)
COREQ: CHE 106 AND CHE 107

## EAR 317 - Sedimentary Processes and Systems

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Ancient sedimentary rocks and their modern
analogs. Physical and chemical aspects of sedimentation and diagenesis. Introduction to sedimentary basins. Economic resources of sedimentary systems. Lecture, laboratory, and field trips. Students should have background knowledge of mineralogy and the history of Earth and life.
PREREQ: EAR 101 OR EAR 110 OR EAR 203 OR (EAR 104 AND EAR 105)

## EAR 325 - Introduction to Paleobiology

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring
Patterns and processes of evolution as expressed in the fossil record. Macroevolution, diversification of major skeletonized phyla, evolutionary paleoecology, and mass extinctions. Lecture, laboratory, and field trips.
PREREQ: EAR 102 OR EAR 210 OR BIO 345 OR EFB 311 OR EFB 320

## EAR 333 - Structural Geology

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Concepts of structural analysis of rocks, stress and strain, rock deformation mechanisms, geologic structures, their properties, and how they are formed. Three lectures and one laboratory a week, field trips including some weekends. Knowledge of trigonometry and geometry required. PREREQ: EAR 110 OR EAR 203 OR (EAR 104 AND EAR 105)
COREQ: EAR 314

## EAR 401 - Hydrogeology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: EAR 601
Fundamentals of groundwater hydraulics. Aquifer flow systems analysis and evaluation. Groundwater-surfacewater relationships. Groundwater chemistry. Additional work required of graduate students.
PREREQ: EAR 101 OR EAR 110 OR EAR 203 OR (EAR 104 AND EAR 105)

## EAR 402 - Numerical Methods in Geosciences

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: EAR 602
Numerical methods and data analysis in geosciences using MATLAB. Topics will include basic statistics for univariate and bivariate datasets including linear regression and interpolation, time-series analysis, the discrete Fourier transform, numerical integration and finite differences. Additional work required of graduate students.
PREREQ: EAR 110 OR EAR 105 OR EAR 203 COREQ: MAT 285 OR MAT 295

## EAR 403 - Geomorphology

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: EAR 603
Landscape formation and evolution as a function of hydrogeologic, glacial, eolian, and tectonic processes acting on Earth materials. Lecture, labs, and field trips, including some weekends. Additional work required of graduate students. PREREQ: EAR 101 OR EAR 110 OR EAR 203 OR (EAR 104 AND EAR 105)

## EAR 404 - Advanced Structural Geology

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Double Numbered with: EAR 604
Selected topics in structural geology and tectonics focusing on the mechanics and kinematics of lithospheric deformation. Fundamentals of stress, strain, brittle and ductile deformation, microstructures and rheology. Additional work required of graduate students PREREQ: EAR 314 AND EAR 333

## EAR 405 - Global Change:Geologic Record

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: EAR 605 The geologic record provides perspective for evaluating future global change. This course will focus on the evolution of climate through Earth's 4.6 billion years and how this record is preserved in ancient rocks and sediments.
PREREQ: EAR 101 OR EAR 110 OR EAR 203 OR (EAR 104 AND EAR 105)

## EAR 406 - Reflection Seismology: Theory and Practice

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Double Numbered with: EAR 606
Students will develop a working understanding of the strengths and pitfalls of the method through classroom lectures, exercises, and hands-on data processing using PROMAX seismic processing software. Prerequisites: coursework/experience in geophysics/permission of instructor. Additional work required of graduate students.

## EAR 407 - Climate Change and Human Origins

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: EAR 607
This course considers the influence of long term climate changes on hominid evolution and human adaptation, as well as how abrupt climate events and transitions may have impacted the distribution of human populations, the
development of agriculture, human conflict and societal change.

## EAR 409 - Senior Thesis in Earth Science

## College of Arts and Sciences

3-6 credit(s) Upon sufficient interest Independent, hypothesis-driven research involving investigative tools and techniques in the Earth Sciences. Students must submit a written thesis to the department and give a public seminar.

## EAR 410 - Applications of GIS in the Earth Sciences

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: EAR 610
Introduction to some of the many uses of image and topographic data within a geographic information system (GIS) to extract information relevant to the study of the Earth. Additional work required of graduate students.

## EAR 417 - Geochemistry

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: EAR 617 Chemistry of Earth processes, including basic thermodynamics, solution chemistry, isotopic chemistry, and kinetics; magmatic crystallization, isotope fractionation, formation of carbonate and evaporitic sediment, ion exchange in clays, and Cosmochemistry.
COREQ: EAR 314 AND CHE 107

## EAR 418 - Petrology

## College of Arts and Sciences

4 credit(s) Upon sufficient interest Double Numbered with: EAR 618 Introduction to the origin of igneous, metamorphic, and sedimentary rocks. Classifications, compositions, tectonic setting, and processes governing the distribution of rocks within the Earth. Lecture, laboratory, and fieldtrips. Additional work required of graduate students. PREREQ: EAR 314

## EAR 419 - Environmental Aqueous Geochemistry

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: EAR 619
Fundamentals of aqueous geochemistry in ground water and surface water in the context of carbonate and silicate dissolution, reactions governing metal oxidation and reduction, mixing of waters and isotopic characterization. One year of college chemistry required. Additional work required of graduate students.

## EAR 420 - Contaminant Hydrogeology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: EAR 620
Fundamentals of solute transport, major classes of groundwater contamination, remediation strategies, natural attenuation characterization, fingerprinting of contaminant types. Additional work required of graduate students. PREREQ: CHE 106 AND (PHY 211 OR EAR 401)

## EAR 428 - Capstone Seminar in Environmental Science

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Crosslisted with: BIO 428
Seminar for students following the environmental science curriculum. Students will work together to critically evaluate, and propose solutions to, current environmental problems using a combination of reading, class discussion, written analyses, and oral presentations.

## EAR 429 - Topics in Paleobiology

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Double Numbered with: EAR 629
Current research in paleobiology with a topical focus. Subjects might include macroevolution, evolutionary paleoecology, extinctions and radiations, stratigraphic paleontology, etc. Additional work required of graduate students. PREREQ: EAR 325
Repeatable 2 time(s), 9 credits maximum

## EAR 430 - Topics in Thermochronology \& Tectonics

## College of Arts and Sciences

2 credit(s) Upon sufficient interest
Double Numbered with: EAR 630
Seminar will focus on research topics in thermochronology and tectonics from current literature. Additional work required of graduate students.
Repeatable 3 time(s), 8 credits maximum

## EAR 431 - Plate Tectonics

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Double Numbered with: EAR 631
Tectonic development of the Earth; definition of plates, their boundaries, motions, and driving forces. Analysis and modeling of plate motions. Additional work required of graduate students. PREREQ: EAR 314 AND EAR 333

## EAR 432 - Seafloor Spreading and Oceanic Lithosphere

College of Arts and Sciences
3 credit(s) Upon sufficient interest

Double Numbered with: EAR 632
An investigation of the products and processes of seafloor spreading from the perspective of geological and geophysical studies of mid-ocean ridge spreading centers, oceanic lithosphere and ophiolite complexes. Additional work required of graduate students.
PREREQ: EAR 314 AND EAR 333

## EAR 433 - Topics in Active Tectonics

College of Arts and Sciences
2 credit(s) Upon sufficient interest Double Numbered with: EAR 633
The use of modern methods to study tectonic processes along active plate margins, focusing on the evolution of topography expressed in orogen and basin development, including the style and accommodation of crustal and mantle deformation. Additional work required of graduate students
PREREQ: EAR 333 OR EAR 431
Repeatable 2 time(s), 6 credits maximum

## EAR 435 - Geophysics

College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 635
Fundamental geophysical parameters; seismology and Earth structure; gravity and magnetic fields with application of potential theory; terrestrial rotation and shape; heat flow, thermal state, and evolution of the Earth. Additional work required of graduate students.
PREREQ: MAT 296 AND PHY 212

## EAR 443 - Advanced Topics in Geomorphology <br> College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: EAR 643
This course presents selected papers from the literature that contribute to current thought in geomorphology and later focus on a topic that can vary from year to year. Additional work required of graduate students.
PREREQ: EAR 403
Repeatable 1 time(s), 6 credits maximum

## EAR 444 - Thermochronology

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Double Numbered with: EAR 644
Methods used in Earth Sciences to determine temperature-time histories of crustal terranes including 40Ar/39Ar, fission track, and U-Th/He techniques. Diffusion theory and applications of thermochronology to tectonics and landscape evolution, P-T-t paths of crustal terranes. Additional work required of graduate students.

## EAR 455 - Geochemical Patterns in the History of Earth and Life

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: EAR 655
Insights gained from the geochemistry of fossils and sedimentary sequences into the history of the Earth's surface. Emphasis on relationships between the biological world and the physical environment as revealed through stable and radiogenic isotopes and elemental chemistry. Additional work required of graduate students.
PREREQ: EAR 325 AND EAR 417

## EAR 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## EAR 478 - Isotope Geology

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Double Numbered with: EAR 678 Isotope geochemistry is used in all branches of Earth Sciences. This course covers the following topics: Radioactive decay, $\mathrm{Rb}-\mathrm{Sr}, \mathrm{Sm}-\mathrm{Nd}$, and Lu-Hf isotope geochemistry; U-Pb geochronology, 14 C dating; $0, \mathrm{H}$, and C isotope geochemistry. Additional work required of graduate students. PREREQ: EAR 417

## EAR 483 - Departmental Colloquium

## College of Arts and Sciences

1 credit(s) Every semester
Double Numbered with: EAR 683
Students attend the Department of Earth Sciences colloquium lectures and write up summaries of a subset of talks. Provides exposure to current research in a wide array of Earth Science disciplines. Additional work required of graduate students.
Repeatable 2 time(s), 3 credits maximum

## EAR 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## EAR 499 - Honors Capstone Project

College of Arts and Sciences
1-3 credit(s) Upon sufficient interest

Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## EAR 510 - Paleolimnology

## College of Arts and Sciences

3 credit(s) Irregularly
The records of environmental change contained within lake sediments. Basic background in limnology followed by field/laboratory research projects and presentations. Upper division undergraduate science majors.

## EAR 544 - Quaternary Environmental and Climate Change

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Proxy records from marine, lacustrine, glacial, and terrestrial environments for climate and environmental change during the Quaternary. Comparison with numerical models of atmosphere and oceans. Discussion of current literature and the potential for future global change.

## EAR 590 - Independent Study

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## Economics

## ECN 101 - Introductory

 Microeconomics
## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to microeconomics. Consumer demand, theory of production, markets and prices, social welfare, and related topics. Credit is given for either ECN 101, 102 or ECN 203.

## ECN 102 - Introductory Macroeconomics

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to concepts and methods of economic analysis. Emphasis on such macroeconomic topics as gross domestic product, unemployment, money, and theory of national income. Credit is given for either ECN 101,102 or ECN 203.

## ECN 203 - Economic Ideas and Issues

## College of Arts and Sciences

3 credit(s) Every semester
Foundation of modern Western economic
thought. The model economists have built on this foundation as applied to current issues facing individuals and society. Credit is given for either ECN 203 or ECN 101, 102 or ECN 109.

## ECN 258 - Poverty and Discrimination in America

## College of Arts and Sciences

3 credit(s) Irregularly Crosslisted with: WGS 258
Nature and causes of inequality, poverty, and discrimination in rural and urban America. Income maintenance, employment, training, education, and other antipoverty programs; antidiscrimination and equal opportunity policies. Students may not receive credit for both ECN/WGS 258 and ECN/ WGS 358.

## ECN 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## ECN 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## ECN 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. PREREQ: (ECN 101 AND ECN 102) OR ECN 203 Repeatable

## ECN 301 - Intermediate Microeconomics

College of Arts and Sciences
3 credit(s) Every semester
Concepts and tools for the analysis of the behavior of consumers and firms, consumption decisions, market structures, and general equilibrium. Pricing, production, purchasing, and employment policies. Both ECN 301 and 311 cannot be counted toward the major/minor. Credit cannot be given for ECN 301 after completing ECN 311. Quantitative skills requirements of liberal arts core recommended. PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 302 - Intermediate Macroeconomics

## College of Arts and Sciences

3 credit(s) Every semester
National product and income concepts, measurements, and relationships;
interrelationships of the major segments of the national economy; forces affecting the general level of economic activity. Quantitative skills requirements of liberal arts core recommended. PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 304 - The Economics of Social

 Issues
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Application of tools developed in introductory economics to current issues facing society including, but not limited to: crime, education, farm policy, alcohol/tobacco/drugs, the environment, health care, poverty/inequality, immigration and discrimination.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 305 - Economics of Personal Finance

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
This introductory course applies fundamental economic and financial concepts qualitatively to cover aspects of consumer personal finance, including record keeping, banking, saving, borrowing, using credit, investing, insurance, doing taxes, retirement, and end-of-life considerations. Students may not receive credit for both ECN 305 and FIN 378.
PREREQ: ECN 203

## ECN 310 - Special Topics In Economics

## College of Arts and Sciences

3 credit(s) Irregularly
Various special topics of economic issues offered as available.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203 Repeatable

## ECN 311 - Intermediate Mathematical Microeconomics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Covers the same topics as covered in ECN 301, but the presentation is more mathematical than ECN 301. Both ECN 301 and 311 cannot be counted towards the major/minor. Credit cannot be given for ECN 301 after completing ECN 311. PREREQ: ((ECN 101 AND ECN 102)) OR ECN 203) AND (MAT 295 OR MAT 296)

## ECN 312 - Behavioral Economics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Offered only in London. Examines and revises assumptions underlying standard economic theories and models to develop a fuller understanding of human behavior, increase their explanatory power, and enable more accurate predictions from such theories
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 313 - The Economics of Happiness

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Offered only in Strasbourg. Economic matters and their evolution since WWII, examining critical issues such as quality of life, sustainable development, and measures of economic performance; how factors such as income, unemployment, inflation and inequality affect societal and personal happiness.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 325 - Economics and Gender

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 325
Economic issues examined within a gender sensitive context. Includes the economics of family, the economics of marriage, and labor market discrimination and segregation.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 355 - Economics of Health and Medical Care

College of Arts and Sciences
3 credit(s) Irregularly
Application of economics concepts to the study of health care, especially the U.S. system. Topics include the nature of the commodity health care; health production functions; markets; financing; behavior of providers; public policy; reform proposals.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 358 - Economics of US Poverty and Discrimination

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 358
Economic analysis of inequality, poverty, and discrimination, as applied to USA. Income maintenance, employment, training, education, and other antipoverty programs; antidiscrimination and equal opportunity policies. Students may not receive credit for both ECN/WGS 258 and ECN/ WGS 358.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 361 - Economics of European Integration

## College of Arts and Sciences

3 credit(s)
Origins and history of European Union integration, integration of trade, financial and monetary policies, the Euro, and EU external trade relations. Offered regularly through SU Abroad.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 362 - Globalization Development and Environment

College of Arts and Sciences
3 credit(s) Every semester Crosslisted with: PSC 462
Offered only in London. Differing perspectives on changing global economy and nature of modern state. Key ideas regarding development through experiences of developing countries in Asia and Africa.

## ECN 363 - Economic Development of China

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Hong Kong. Examines the economic development of China since 1949, including impact of such policies as the Great Leap Forward, the Cultural Revolution, Deng's Open Door commitment, and current strategies. PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 364 - International Economic Relations

College of Arts and Sciences
3 credit(s) Every semester
Offered only in Hong Kong. Economic links binding countries and similar political entities. Topics include development of global trade regime, impacts of globalization, dynamics of financial crisis, rise of transnational corporations. PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 365 - The World Economy

## College of Arts and Sciences

3 credit(s) Every semester
Non-technical introduction to analysis of international economic issues. Protectionism, the multinational firm, the debt crisis, international macroeconomic policy coordination, and European integration. May not be used to satisfy the economics major upper-division elective requirement.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 366 - Economic Policies of the European Union

College of Arts and Sciences
3 credit(s) Every semester

Crosslisted with: INB 366
Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 373 - Industrial Organization \& Policy

## College of Arts and Sciences

3 credit(s) Irregularly
Analysis of structure, conduct, and performance of industry. Experience with antitrust laws and trade regulations. Case studies of specific industries.
PREREQ: (ECN 101 AND ECN 102) OR ECN 203

## ECN 390 - Independent Study

## College of Arts and Sciences

## 1-6 credit(s)

Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. PREREQ: (ECN 101 AND ECN 102) OR ECN 203 Repeatable

## ECN 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ECN 410 - Topics in Economic Applications

## College of Arts and Sciences

3 credit(s) Irregularly
Various topics in economic policy and applications.
PREREQ: (ECN 301 OR ECN 311) AND ECN 302 Repeatable

## ECN 421 - Game Theory and Economic Strategy

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring A choice by one economic agent typically affects other economic agents. This course teaches concepts useful in predicting how agents behave in such strategic situations. The focus is on applications in economics and other areas.
PREREQ: (ECN 301 OR ECN 311) AND (MAT
284 OR MAT 285 OR MAT 295 OR MAT 296)

## ECN 422 - Introduction to Statistics and Econometrics

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring

Basic theory and application of probability, statistical inference, and regression analysis for economics majors.Designed to expose the student to the statistical techniques economists use in estimating, testing, and forecasting economic relationships.
PREREQ: (ECN 301 OR ECN 311) AND ECN 302

## ECN 431 - Public Economics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Theory of the public sector. Government expenditures, revenue, and debt. Intergovernmental fiscal relations. Government contributions to stabilization and growth.
Interaction of public and private sectors. PREREQ: ECN 301 OR ECN 311

## ECN 435 - State and Local Public Finance

College of Arts and Sciences
3 credit(s) Irregularly
Economic analysis of state and local government structures. Description and equity-efficiency-yield implications of state and local government tax systems. Determinants and consequences of state and local government expenditures. Fiscal federalism.
PREREQ: ECN 301 OR ECN 311

## ECN 437 - Environmental and Resource Economics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Optimal use of exhaustible and renewable resources and pollution. Examines energy sources, environmental amenities and water. Pollution control policies examined include emissions taxes, tradable permits, direct regulation, subsidies, and negotiation. Valuing environmental quality and other non-marketed goods; risk assessment, hedonic pricing and contingent valuation.
PREREQ: ECN 301 OR ECN 311

## ECN 441 - Urban Economics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Theoretical and empirical analyses of growth, structure, and resource allocation in urban regions. Selected urban problems: housing and housing finance; poverty; transportational neighborhood degradation; and financing local public services.
PREREQ: ECN 301 OR ECN 311

## ECN 443 - Real Estate Economics and Finance <br> College of Arts and Sciences <br> 3 credit(s) At least 1 x fall or spring <br> Analysis of real estate markets \& real estate

finance. Consideration of land and mortgage markets; public policies; house price movements. Analysis of mortgage instruments; payment streams, mortgage contracts and risk between lenders and borrowers.
PREREQ: ECN 301 OR ECN 311

## ECN 451 - Labor Economics

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Contem- porary theories and issues of public policy concerning labor supply and demand, wage determination, disincentive effects of public transfer payments (e.g. welfare), unemployment, human capital, and unions.
PREREQ: ECN 301 OR ECN 311

## ECN 465 - International Trade Theory

 and Policy
## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Economic causes and consequences of international trade. Models of trade, gains from trade, tariffs and other controls on trade, and international institutions guiding the trading systems.
PREREQ: ECN 301 OR ECN 311

## ECN 470 - Experience Credit

College of Arts and Sciences
1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

ECN 481 - Introduction Money \& Banking

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Financial instruments and structure: commercial banking organization, operation and control of the banking system. Federal Reserve System. Monetary policy and economic stability. PREREQ: ECN 302

## ECN 487 - Economic Growth

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The study of economic growth: models, their applications, and empirical evidence across different countries. Emphasis placed on understanding recent advances in the area: particularly, those pertaining to the nexus between growth and labor market.
PREREQ: ECN 301 OR ECN 311

## ECN 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## ECN 495 - Distinction Thesis Seminar in Economics I

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
First semester in a year-long course for economics undergraduate thesis students who are oriented to professional economics research and guided as they define their thesis projects. Senior economic students only. Permission from Instructor.

## ECN 496 - Distinction Thesis Seminar in Economics II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Second semester in a year-long course for economics undergraduate thesis students who will present ongoing research, constructively engage the work of other thesis writers, and work in cooperation with a faculty mentor to complete research. Senior economic students only. Permission from Instructor.

## ECN 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## ECN 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ECN 505 - Mathematical Economics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Introduction to use of basic mathematical techniques in economic analysis.
PREREQ: (ECN 301 OR ECN 311) AND (MAT 295 AND MAT 296)

## ECN 510-Special Topics in Economics

## College of Arts and Sciences

3 credit(s) Irregularly
Various special topics of economics issues offered
as available.
PREREQ: ECN 301 OR ECN 311
Repeatable 5 time(s), 18 credits maximum

## ECN 521 - Economic Statistics

## College of Arts and Sciences

3 credit(s) Every semester
Statistical methods applied to economics. Conventional descriptive statistics, conceptual and measurement problems peculiar to economics. Analytical statistics, including time-series analysis, elementary theory of probability and statistical inference, correlation and regression analysis. Nonparametric methods. This course is not suitable for students who have taken six credits of statistics to fulfill their quantitative skills requirement. Quantitative skill requirements of liberal arts core is recommended.
PREREQ: ((ECN 101 AND ECN 102) OR ECN 203) AND (MAT 295 AND MAT 296)

## ECN 522 - Econometric Methods

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Statistical procedures. Problems of estimating parameters in regression models of economic behavior.
PREREQ: (ECN 302 AND ECN 521) AND (ECN 301 OR ECN 311)

## ECN 525 - Economics and Gender

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: WGS 525 Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.

## ECN 566 - International Macroeconomics and Finance

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Monetary, fiscal, and regulatory consequences of mushrooming international financial markets including equities, bonds and other securities, commodity and options contracts, and bank deposits and loans.
PREREQ: ECN 302

## ECN 580 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level,
title, and grade for the student's transcript. Repeatable

## English as a Second Language

## ENL 201 - Intermediate English for Non-native Speakers

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring First of a two-semester, integrated-skills course preparing students to participate in academic contexts. Students review fundamental and more advanced grammar structures through a variety of activities that involve speaking, listening, reading, and writing. Students cannot enroll in ENL 201 after earning credit for ENL 202, ENL 205, ENL 207, ENL 211, or ENL 213. PREREQ: REQUIRED PLACEMENT EXAM SCORE

## ENL 202 - Intermediate English for

 Non-native SpeakersCollege of Arts and Sciences
3 credit(s)
Second of a two-semester integrated skills course preparing students to participate in academic contexts. Students review fundamental and more advanced grammar structures through a variety of activities that involve speaking, listening, reading, and writing. Students cannot enroll in ENL 202 after earning credit for ENL 205, ENL 207, ENL 211, or ENL 213.
PREREQ: ENL 201 OR REQUIRED PLACEMENT EXAM SCORE

## ENL 203 - Speaking and Listening for

 Non-native Speakers of English
## College of Arts and Sciences

3 credit(s) Every semester
Speaking/listening focused on academic and social situations. Intensive work on note-taking and the sounds, stress, rhythm, and intonation of English, practiced in group work and presentations. Can be taken with any other ENL course.
PREREQ: REQUIRED PLACEMENT EXAM SCORE

## ENL 205 - Intensive Intermediate English for Non-Native Speakers

## College of Arts and Sciences

6 credit(s) At least $1 x$ fall or spring A combination ENL 201/202 that focuses on the practical application of grammatical concepts in reading, writing, and speaking English. Credit cannot be given for ENL 205 if credit is given for ENL 201 or ENL 202. English Language Assessment Exam recommendation required. Students cannot enroll in ENL 205 after earning credit for ENL 207, ENL 211, or ENL 213. PREREQ: REQUIRED PLACEMENT EXAM SCORE

## ENL 207 - Advanced Integrated Skills for Non-native Speakers of English

## College of Arts and Sciences

3 credit(s) Every semester
An integrated skills course focusing on academic writing and reading. Emphasizing paragraph organization and development, complex sentence structures, reading skills, and vocabulary. Students cannot enroll in ENL 207 after earning credit for ENL 211 or ENL 213.
PREREQ: ENL 202 OR ENL 205 OR REQUIRED PLACEMENT EXAM SCORE

## ENL 211 - Composition for Non-native Speakers of English

## College of Arts and Sciences

3 credit(s) Every semester
Expository writing and reading. Students develop an awareness of the cultural and discourse expectations in written English, through reading and responding to articles on a variety of topics and writing essays of increasing complexity. Students cannot enroll in ENL 211 after receiving credit for ENL 213.
PREREQ: ENL 207 OR REQUIRED PLACEMENT EXAM SCORE

## ENL 213 - Advanced Academic Writing and Research for Non-native Speakers of English

## College of Arts and Sciences

3 credit(s) Every semester
Development of critical reading and thinking skills used in scholarly research in a variety of disciplines. Students learn to summarize, synthesize, critique, and document, and use library resources effectively.
PREREQ: ENL 211 OR REQUIRED PLACEMENT EXAM SCORE

## ENL 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## English and Textual Studies

## ETS 107 - Living Writers

## College of Arts and Sciences

3 credit(s) Every semester Introduction to visiting writers and their work. Lectures and small group sections emphasize dynamic and plastic nature of writing. Opportunity to question the authors directly on content, influences, and technique.

## ETS 113 - Survey of British Literature, Beginnings to 1789

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
British literature before 1789.

## ETS 114 - Survey of British Literature, 1789 to Present <br> College of Arts and Sciences <br> 3 credit(s) At least $1 x$ fall or spring <br> British literature since 1789.

## ETS 115 - Topics in British Literary History

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Literary and cultural texts from Great Britain and the Commonwealth studied in the context of British history, culture, and politics. Readings may be focused by historical or thematic issues.
Repeatable 2 time(s), 9 credits maximum

## ETS 117 - Survey of American Literature, Beginnings to 1865

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring American writing before 1865 , mainly from the English-speaking colonies and the United States.

## ETS 118 - Survey of American Literature, 1865 to Present

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring American writing since 1865 , mainly from the United States.

## ETS 119 - Topics in U.S. Literary History

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
United States literary and cultural texts studied in the context of American history, culture, and politics. Readings may be focused by historical periods or thematic issues.
Repeatable 2 time(s), 9 credits maximum

## ETS 121 - Introduction to Shakespeare

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Selected plays of Shakespeare read in conjunction with performances on video.

## ETS 122 - Introduction to the Novel

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Critical study of the history and development of the novel as literary form. Selected British, American, and postcolonial novels from the 18th century to the present.

## ETS 142 - Narratives of Culture:Introduction to Issues of Critical Reading <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Exploration of complexities of contemporary reading and interpretation of varied texts of culture. Concepts such as authorship, the book, readers, textuality, and contexts.

## ETS 145 - Reading Popular Culture

College of Arts and Sciences
3 credit(s) Every semester
Semiotic analysis of American culture and its artifacts. Topics of analysis may include consumerism, advertising, film, music, TV, video, language, gender/race/class, mythic characters, cultural outlaws, virtual culture.

## ETS 146 - Reading Screen Culture

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Critical analysis and historical study of new and emergent forms of screen-based texts.

## ETS 151 - Interpretation of Poetry

College of Arts and Sciences
3 credit(s) Every semester
Critical study of poetry from various historical periods. Formal, theoretical, and interpretive issues.

## ETS 152 - Interpretation of Drama

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Critical study of drama from various historical periods. Formal, theoretical, and interpretive issues.

## ETS 153 - Interpretation of Fiction

College of Arts and Sciences
3 credit(s) Every semester
Critical study of fiction from more than one historical period. Formal, theoretical, and interpretive issues.

## ETS 154 - Interpretation of Film

## College of Arts and Sciences

3 credit(s) Every semester
Critical study of film from various historical periods. Formal, theoretical, and interpretive issues.

## ETS 155 - Interpretation of Nonfiction

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Critical study of nonfiction from more than one historical period and geographic locale. Formal, theoretical, and interpretive issues.

## ETS 181-Class and Literary Texts

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Construction and representation of "class," especially as it affects the production and reception of literary and other cultural texts.

## ETS 182 - Race and Literary Texts

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Construction and representation of "race," especially as it affects the production and reception of literary and other cultural texts.

## ETS 184 - Ethnicity and Literary Texts

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Ethnicity in literary and theoretical texts. Emphasizing conceptual paradigms, social issues, and aesthetic considerations in the practice of reading texts from ethnically differentiated literary traditions.

## ETS 192 - Gender and Literary Texts

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: WGS 192
Construction and representation of "gender," especially as it affects the production and reception of literary and other cultural texts.

## ETS 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ETS 215 - Introductory Poetry Workshop

## College of Arts and Sciences

3 credit(s) Every semester
Practice in writing poetry.

## ETS 217 - Introductory Fiction Workshop <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Practice in writing fiction.

## ETS 230 - Topics in Ethnic Literary Traditions

College of Arts and Sciences
3 credit(s) Irregularly
Studies in an ethnic literary tradition such as
Latino, Irish, or Judaic literature.
Repeatable 2 time(s), 9 credits maximum

## ETS 235-Classics of World Literature I

## College of Arts and Sciences

3 credit(s) Irregularly
Readings from ancient Mesopotamia, Egypt, China, India, Greece, Israel, Rome, and Arabia investigate notions of literary merit, and their social, religious, and political ramifications in relations to historical context (ca. 2500 BCE1000 CE ).

## ETS 236 - Classics of World Literature II

College of Arts and Sciences
3 credit(s) Irregularly
Readings from great women writers of Japan and from Dante, Cervantes, and Shakespeare; and from world oral and written traditions that investigate notions of literary merit and their ramifications in historical context (ca. 1000 CEpresent).

## ETS 242 - Reading and Interpretation

College of Arts and Sciences
3 credit(s) Every semester
Introduction to questions of textuality and representation, making use of some theoretical material. Multiple ways of reading, with some emphasis on techniques of close textual analysis.

## ETS 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## ETS 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## ETS 301 - Practicum in Reading and Writing Prose

## College of Arts and Sciences

3 credit(s) Irregularly
Creative and critical engagement with the practices of reading and writing prose. Emphasis on both analytical and creative work.

## ETS 303 - Practicum in Reading and Writing Fiction

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Creative and critical engagement with the practices of reading and writing fiction. Emphasis on both analytical and creative work.

## ETS 304 - Practicum in Reading and Writing Poetry

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Creative and critical engagement with the
practices of reading and writing poetry. Emphasis
on both analytical and creative work.

## ETS 305-Topics in Critical Analysis

College of Arts and Sciences
3 credit(s) Every semester
Objects, methods, and theories of one or more modes of critical reading.
PREREQ: ETS 242
Repeatable 2 time(s), 9 credits maximum

## ETS 310 - Topics in Literary Periods

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Chronological periods or movements in literary history; issues of periodization.
Repeatable 2 time(s), 9 credits maximum

## ETS 315 - Topics in Ethnic Literatures and Cultures

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Readings in one or more ethnic literature and culture, such as Irish, Italian American, Judaic, Latino, Native American, or Asian American. Repeatable 2 time(s), 9 credits maximum

## ETS 320 - Topics in Authors

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
One or more authors studied in relation to literary, social, and/or biographical history. Repeatable 2 time(s), 9 credits maximum

## ETS 325 - History and Varieties of English

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Issues in the history and heterogeneity of the English language.

[^6]Modes of theorizing textual and cultural interpretation.
Repeatable 2 time(s), 9 credits maximum

## ETS 340 - Topics in Theorizing Forms and Genres <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring Literary forms and genres and their features. Repeatable 2 time(s), 9 credits maximum

## ETS 345-Critical Theory

## College of Arts and Sciences

3 credit(s) Irregularly
Advanced survey of contemporary theories of cultural and literary analysis.

## ETS 350 - Topics in Reading Nation and Empire <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring <br> National cultures, imperialism, and resistance. <br> Repeatable 2 time(s), 9 credits maximum

## ETS 355 - The Politics of the English Language <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> How culture embeds and enacts attitudes toward language: emergence of "standard" English, world Englishes and globalization, English-Only movement, gender and language, Ebonics, political correctness.

## ETS 360 - Topics in Reading Gender and Sexualities

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 360
Textual, cultural, and/or historical constructions of gender and sexualities.
Repeatable 2 time(s), 9 credits maximum

## ETS 401 - Advanced Writing Workshop: Poetry <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Extensive practice in writing poetry. <br> Repeatable 1 time(s), 6 credits maximum

## ETS 403 - Advanced Writing Workshop: Fiction <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Extensive practice in writing fiction, particularly the short story. <br> Repeatable 1 time(s), 6 credits maximum

## ETS 405 - Topics in Medicine and Culture <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Special topics in medicine and culture. Topics will vary.

## ETS 410 - Topics in Forms and Genres

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
A literary genre studied in a particular historical period.
Repeatable 2 time(s), 9 credits maximum
ETS 420 - Topics in Cultural Production and Reception

## College of Arts and Sciences

3 credit(s) Irregularly
Historical study of how the production and reception of cultural texts influence their interpretation.
Repeatable 2 time(s), 9 credits maximum

## ETS 425 - Topics in Historical Modes of Inquiry

## College of Arts and Sciences

3 credit(s) Irregularly
Thematic, critical or methodological issues in the historical study of texts.
Repeatable 2 time(s), 9 credits maximum

## ETS 426 - Topics in Literature, Culture,

 and Social Change
## College of Arts and Sciences

3 credit(s) Irregularly
Thematic, critical, or methodological issues in the historical study of texts.
Repeatable 1 time(s), 9 credits maximum

## ETS 430 - Topics in Theorizing Representation <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Theories, modes, and effects of representation. Repeatable 2 time(s), 9 credits maximum

## ETS 440 - Topics in Theorizing History and Culture

## College of Arts and Sciences

3 credit(s) Irregularly
One or more theories of history, historicity, and culture.
Repeatable 2 time(s), 9 credits maximum

## ETS 444 - Topics in Theoretical Modes of Inquiry

Thematic, critical, or methodological issues in the theoretical study of texts.
Repeatable 2 time(s), 9 credits maximum

## ETS 450 - Topics in Reading Race and Ethnicity <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Constructions of race and/or ethnicity in various cultural texts and discourses. <br> Repeatable 2 time(s), 9 credits maximum

ETS 460 - Topics in Reading Class and Economic Materiality
College of Arts and Sciences
3 credit(s) Irregularly
Discourses of class and economic materiality as sites of power and resistance.
Repeatable 2 time(s), 9 credits maximum
ETS 464 - Topics in Reading
Institutions and Ideologies
College of Arts and Sciences
3 credit(s) Irregularly
Studies of institutions and ideologies in mediating and determining cultural representations, political power, and knowledge.
Repeatable 1 time(s), 9 credits maximum
ETS 465 - Topics in Political Modes of Inquiry

## College of Arts and Sciences

3 credit(s) Irregularly
Thematic, critical, or methodological issues in the political study of texts.
Repeatable 2 time(s), 9 credits maximum

## ETS 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## ETS 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## ETS 494 - Research Practicum in English and Textual Studies

## College of Arts and Sciences

1 credit(s) At least 1x fall or spring Intensive practice in research and study of research methodologies aimed at defining an ETS thesis project.

## ETS 495 - Thesis Workshop

## College of Arts and Sciences

2 credit(s) At least 1x fall or spring Intensive directed research and writing aimed at producing an ETS thesis project.

## ETS 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Foreign Languages and Literatures

## FLL 131 - Chinese Writing

## College of Arts and Sciences

1 credit(s) Every semester
Offered only in Hong Kong. Intensive writing class for students who have no prior knowledge of Chinese writing. Origin of Chinese characters; traditional Chinese writing forms will be taught.

## FLL 141 - Beginning Cantonese Conversation

## College of Arts and Sciences

1 credit(s) Every semester
Offered only in Hong Kong. Formal and colloquial speech; effective communication with native Cantonese speakers; culture and day-to-day life.

## FLL 404 - 'AZAHAR' The Islamic Conquest and the Christian Reconquest

## College of Arts and Sciences

2 credit(s) Every semester
Crosslisted with: HUM 404, MES 404
Thirteen day interdisciplinary seminar. Lectures in situ. Artistic, historical, cultural monuments of Cordoba, Sevilla, Granada and Toledo or Salamanca. Theological, philosophical and historical thought as to recreate the artistic and cultural climate of medieval al-Andalus/Spain.

## French and Francophone Studies

## FRE 101 - French I

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in French. No prior experience or admission by placement testing. Students cannot enroll in FRE 101 after earning credit for FRE 102, FRE 201, FRE 202, or higher.
PREREQ: REQUIRED PLACEMENT EXAM SCORE

## FRE 102 - French II

## College of Arts and Sciences

4 credit(s) Every semester Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in French. Students cannot enroll in FRE 102 after earning credit for FRE 201, FRE 202, or higher. PREREQ: FRE 101 OR REQUIRED PLACEMENT EXAM SCORE

## FRE 201 - French III

## College of Arts and Sciences

4 credit(s) Every semester
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in French. Students cannot enroll
in FRE 201 after earning credit for FRE 202 or higher.
PREREQ: FRE 102 OR REQUIRED PLACEMENT EXAM SCORE

## FRE 202 - French IV

## College of Arts and Sciences

4 credit(s) Every semester Continuing proficiency-based course which focuses on reading, discussing, and analyzing authentic texts as a basis for the expression and interpretation of meaning. Conducted in French. Students cannot enroll in FRE 202 after earning credit for a course higher than FRE 202.
PREREQ: FRE 201 OR REQUIRED PLACEMENT EXAM SCORE

## FRE 210 - Intermediate Oral Practice

College of Arts and Sciences
1 credit(s) Every semester Additional practice for students in FRE 201 or above. Attention confined to the spoken language. Weekly discussion of a variety of topics in French. PREREQ: FRE 201 OR FRE 202
Repeatable

## FRE 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## FRE 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FRE 301 - French Grammar and Composition

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Advanced study of French language structures and practice in writing skills. Conducted in French.

## FRE 302 - French Phonetics and Conversation

College of Arts and Sciences
3 credit(s)
Study of French pronunciation, the phonetic alphabet, and phonology. Conversational practice based upon selected aspects of French life and culture. Conducted in French.

## FRE 305 - Evolution and Revolution through the Centuries

College of Arts and Sciences
3 credit(s) Irregularly
Evolution of French literature: Middle Ages to
French Revolution. Retracing trajectory that les letters francaises followed, from first 'song' composed in French to various points of new genres invented, experimented, incorporated in body of literature. Conducted in French.

## FRE 306 - From Romanticism to Postmodernism

College of Arts and Sciences
3 credit(s) Irregularly
Representative works from the 19th century to present. Special emphasis on major literary movements (i.e. romanticism, realism, naturalism, modernism, post-modernism) and their influences. Conducted in French.

## FRE 307 - Varieties of Realism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Realist forms of literature in 19th- and 20th-
century French literature through close readings and analyses of narrative techniques. Offered in Strasbourg only.
PREREQ: FRE 202

## FRE 315 - French Civilization

## College of Arts and Sciences

3 credit(s) Irregularly
A survey of social and cultural evolution in France from prehistoric times to 1958. Conducted in French.

## FRE 316 - Contemporary French Culture

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 French society and culture from post-World War II to present: contemporary French politics, economy and society, dynamics of intellectual and cultural milieus. Underlying principles of French culture, i.e. definition of self, society distinguishing France from others. Conducted in French.

## FRE 317 - Business French

## College of Arts and Sciences

3 credit(s) Irregularly
Language usage in relation to French business.
Conducted in French.

## FRE 325 - Junior Language Usage

## College of Arts and Sciences

3 credit(s) Irregularly
Continuation of FRE 325. Also offered regularly abroad.

## FRE 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FRE 401 - Translation/Traduction

## College of Arts and Sciences

3 credit(s) Irregularly
Theory and practice of translation (French to English and English to French) using a variety of texts. Focus on Ottomans, Italy, France, Iberia, North Africa, 1348-1789. Topics include international relations and empire-building in Africa, Asia, and Europe, commerce, piracy, plague, religion, family/sexuality, architecture, political and cultural developments during Renaissance, Age of Discovery, Enlightenment.

## FRE 403 - Eighteenth-Century French <br> Literature and Film Adaptation

College of Arts and Sciences
3 credit(s) Irregularly
A critical study of the cinematic adaptation of selected French and Francophone literary texts. Conducted in French.

## FRE 405 - French Culture in Age of Louis XIV

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: FRE 605
Study of French literature, aesthetics and culture of absolutism. Conducted in French. Additional work required of graduate students.

## FRE 407 - French Libertine Fictions

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: FRE 607
Analysis of seventeenth- and eighteenth-century French libertine texts and their relation to philosophy, art, religion, and society. Conducted in French. Additional work required of graduate students.

## FRE 409 - French Culture and Revolution

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: FRE 609
French enlightenment literature and culture considered within the context of the French Revolution. Conducted in French. Additional work required of graduate students.

## FRE 411 - Moliere

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: FRE 611 Study of the playwright's major works in light of contemporary political, social, and cultural trends. Conducted in French. Additional work required of graduate students.

## FRE 412 - French Women Writers

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: WGS 412
Double Numbered with: FRE 612
Trends in French feminine and feminist writing from the early modern period to the present. Conducted in French. Additional work required of graduate students.

## FRE 417 - "Impressions

d'Afrique":Caribbean Gazes
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: FRE 617
A survey of African issues through the eyes of Francophone Caribbean writers and their texts. Conducted in French. Additional work required of graduate students.

## FRE 419 - Sembene Ousmane and the African Cinema

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: FRE 619
A study of Sembene Ousmane's work as an introduction to the aesthetics and politics of Black African Cinema, and to issues of film history and theory. Conducted in French. Additional work required of graduate students.

## FRE 421 - Francophone African

 Criticism
## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: FRE 621
Major trends in Francophone African literary criticism. Conducted in French. Additional work required of graduate students.

## FRE 427 - The Renaissance Body

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Double Numbered with: FRE 627
Examines the body as a trope in French literature and culture of the late-medieval and Renaissance periods. Additional work required of graduate students.

## FRE 431 - Montaigne and the New World of Renaissance Writing

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: FRE 631
Examines the modernity of Montaigne's Essais (1580-92) by focusing on the author's creation of a self-portrait in writing. Additional work required of graduate students.

## FRE 439 - Art in France from <br> Impressionism to Surrealism

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HOA 365
Focus on major painters who lived and worked in Paris from 1860 to 1945. Emphasis on analyzing and writing about painting. Field trip to Paris. Conducted in French. Offered in Strasbourg only. PREREQ: FRE 202

## FRE 441 - France Under the Occupation

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Interdisciplinary study of the Occupation period (1940-1945) through documents, films, and creative works. Offered in Strasbourg only.
PREREQ: FRE 202 AND ANY FRE 300 LEVEL

## FRE 443 - Modern French Drama

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Introduction to major French playwrights from the
late nineteenth century to the present. Includes
outings to productions in Strasbourg's theaters.
Offered in Strasbourg only.
PREREQ: FRE 202 AND ANY FRE 300 LEVEL

## FRE 447 - France from the Revolution to the Great War

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: HST 447
Study of the rise of the French Republic, its revolutions, and its recurrent lapses into authoritarian rule, notably under Napoleon I and III. Conducted in French. Offered in Strasbourg only. [Effective spring 2009]
PREREQ: FRE 202

## FRE 449 - France from the Treaty of Versailles to European Integration

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: HST 449
Analysis of major events in recent French history, including the rise of the Popular Front, the Nazi
Occupation, the end of colonial rule, and the process of European integration conducted in French. Offered in Strasbourg only. [Effective spring 2009]
PREREQ: FRE 202

## Forensic Science

## FSC 206 - Intermediate Forensic

## Science

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Provides a detailed look at some of the scientific ideas behind crime detection and how they interact with the legal system. Provides a rational basis for scientific analysis and interpretation of forensic evidence. Reinforced through relevant case studies.
PREREQ: CHE 113

## FSC 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FSC 406 - Advanced Forensic Science

## College of Arts and Sciences

3 credit(s) Every semester
Double Numbered with: FSC 606
Selected areas of current interest in forensic science presented. The application of scientific methods and techniques to crime detection and the law.
PREREQ: CHE 106 OR CHE 109 OR CHE 113 OR BIO 121

## FSC 431 - Statistics for Forensic

 Science
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: FSC 631
Statistical concepts and methods relevant to forensic science. Includes probability, error limits, confidence intervals. Correlation, regression, and calibration. Focus on practical application, including DNA population probabilities, evidence evaluation, and hypothesis testing. Additional work required of graduate students.

## FSC 435 - Medicolegal Death Investigation I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: FSC 635 Medicolegal death investigation which deals with the history, purpose and legal underpinning of death investigations, effectively handling a death scene, and protocols for public safety and scene processing. Additional work required of graduate students.

## FSC 436 - Medicolegal Death Investigation II

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Double Numbered with: FSC 636
Second course in the sequence dealing with information on medicolegal death investigation and deals with procedures for MDI processing and other topics for conducting scientific medicolegal investigations. Additional work required of graduate students.

## FSC 437 - Medicolegal Death Investigation for Emergency Responders

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 637
Course focuses upon the information needed by emergency responders in dealing with suspicious or unexpected deaths. Topics will include dealing with sudden or unexpected deaths, handling the scene, death investigation laws and other topics. Additional work required of graduate students.

## FSC 440 - Special Topics in Advanced Forensics

## College of Arts and Sciences

3 credit(s) Every semester
Double Numbered with: FSC 640
An in-depth study of scientific disciplines engaged in the criminal justice and legal systems by providing a rational basis for interpreting the scientific analysis of forensic evidence through relevant case studies. Additional work required of graduate students.
Repeatable

## FSC 444 - Forensic Chemical Analysis

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Crosslisted with: CHE 444
Double Numbered with: FSC 644
Lecture content, delivered online, and laboratory on analytical methods of forensic chemistry. Underlying theory and direct experience in various chemical tests and spectroscopic methods. Additional work required of graduate students. PREREQ: (CHE 116 AND CHE 117) OR (CHE 119 AND CHE 139)

## FSC 451 - Forensic Pathology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: FSC 651 Introduction to forensic pathology and medicolegal investigation of death. Role and jurisdiction of the Medical Examiner, including the autopsy. Specific patterns of injury, types of deaths referred to the Medical Examiner, postmortem decompositional changes, and special topics of interest in death investigation will be discussed. Additional work required of graduate students.

## FSC 452 - Forensic Mental Health

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 652
Role of consultation, research and clinical practice in areas in which psychiatry is applied to legal issues. Covers how mental health and
legal systems function together; issues common to forensic psychiatric analyses. Additional work required of graduate students.

## FSC 453 - Forensic Toxicology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: FSC 653 Procedures utilized in forensic toxicology, including specimen types, sample preparation, instrumentation, analytical methods, and interpretation of findings. Knowledge of organic and analytical chemistry is strongly advised. Additional work required of graduate students. PREREQ: CHE 116

## FSC 454 - Nuclear Forensics

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: FSC 654
The science behind the detection, analysis, and source attribution of nuclear materials. Includes engineering, social, and governmental considerations in the wide range of circumstances encountered in this field. Offered only online. Additional work required of graduate students. PREREQ: CHE 116

## FSC 457 - Principles of Human Toxicology

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: BIO 457
Double Numbered with: FSC 657
This course examines key aspects of human toxicology, including dose-response relationships, absorption, distribution, biotransformation, elimination, toxicokinetics, molecular mechanisms of toxicity, pesticides, metals, and toxic responses in specific organ systems. Additional work required of graduate students.

## FSC 461 - Firearms and Impression Evidence

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 661
Forensic analysis of firearm and impression evidence and its presentation through court testimony. Manufacturing methods' impact on identification. Serial number restoration, distance determination, full auto conversions, trace evidence, latent print analysis, laboratory quality assurance. Additional work required of graduate students.

## FSC 462 - Forensic Entomology

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: FSC 662

Application and utility of insects as evidence in criminal investigations. Biology and importance of different insect groups in decomposition process. Collection, identification, and processing of insect evidence. Temperature-time relationship in insect growth, its practical use in calculating post-mortem intervals. Additional work required of graduate students.

## FSC 463 - Bloodstain Pattern Analysis

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: FSC 663
A lecture and laboratory introduction to the analysis of bloodstain patterns in a forensic context. History, theory, and scientific principles behind the analysis methods are supported by laboratory creation and analysis of various types of bloodstains. Additional work required of graduate students.

## FSC 465 - Latent Prints

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: FSC 665 Biology of friction ridge skin including pattern class recognition. Digital imaging of latent prints, analysis and comparison, evidence processing including individual mock cases near the end of the semester. Additional work required of graduate students.

## FSC 467 - Forensic Photography

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Double Numbered with: FSC 667 Use of photography in criminal and civil investigations and trials. Changing face of photography and how use of digital cameras has altered rules of evidence and admissibility. Proper use of digital single lens reflex cameras and digital flash. Additional work required of graduate students.

## FSC 468 - Crime Scene Investigation

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Double Numbered with: FSC 668
History and practice of crime scene investigation, including photography, sketches, note-taking, processing and collection of evidence. Includes bloodstain pattern interpretation, collision reconstruction, case studies, mock crime scenes, moot court. Additional work required of graduate students.

## FSC 469 - Science of Countering Weapons of Mass Destruction

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5

Crosslisted with: BIO 469
Double Numbered with: FSC 669
Scientific basis and means for countering WMDs, including biological systems. Protective measures, proven doctrines, practical questions, and problem solving. Additional work required of graduate students.

## FSC 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## FSC 472 - Advanced Light Microscopy

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: BIO 472
Double Numbered with: FSC 672
Theory and practice of modern light microscopy, including the fundamentals of image formation and applications in the biological and biomedical sciences, including reviews of microscopy methods and analog and digital image capture. Additional work required of graduate students. PREREQ: BIO 327

## FSC 476 - Cold Cases

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: BIO 476
Double Numbered with: FSC 676
Methods and practice in solving unsolved cases using fundamental science, court documents, and other sources of information. Will include work on real cases. Additional work required of graduate students.

## FSC 480 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## FSC 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent
of supervising instructor or instructors and the department.
Repeatable

## FSC 498 - Capstone Seminar in Forensic Science

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Explore specific overlaps of primary major with forensic science, make contacts with practitioners in the field, complete a capstone project, and present findings. Project will be determined through consultation between the student, instructor, and at least one practitioner.

## FSC 499 - Honors Capstone Project

## College of Arts and Sciences

## 1-6 credit(s)

Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable

## Geography

## GEO 103 - Environment and Society

## College of Arts and Sciences

3 credit(s) Every semester
Relationship between society and the environment. Natural resource use, climate change politics, food and agriculture, energy, water, and sustainability.

## GEO 105 - World Urban Geography

## College of Arts and Sciences

3 credit(s) Irregularly
Survey of world, urban geography. Major concepts of human geography for non-specialists.

## GEO 155 - The Natural Environment

College of Arts and Sciences
3 credit(s) Every semester
Patterns of the physical phenomena at and near the surface of the earth. Surface configuration, climate, vegetation, and soil and their areal interrelationships.

## GEO 171 - Human Geographies

## College of Arts and Sciences

3 credit(s) Every semester
An integrative overview to human geography. Topics include human-environmental relations, demographic change, cultural landscape; urban and agricultural land use and economic restructuring.

## GEO 200 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not
covered by the standard curriculum but of interest to faculty and students in a particular semester. * Repeatable

## GEO 203 - Society and the Politics of Nature

## College of Arts and Sciences

3 credit(s) Irregularly
Biophysical and social contexts of environmental problems and decision making. U.S. and international issues considered, linking local, regional, and global scales of analysis. Case examples include water management, energy policy, global warming, sustainable development.

## GEO 215 - Global Environmental Change

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Focusing on physical processes and patterns of environmental change, changes occurring as a result of human activities, and the social consequences of environmental change.

## GEO 219 - American Diversity and Unity (Honors)

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Ethnic and racial interactions that influenced American culture's present form, both visible (i.e., landscape) and invisible. Contemporary sociocultural changes in the frontier/West/Alaska, southern California, and the South. For honors students.

## GEO 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Irregularly
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## GEO 272 - World Cultures

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring The globalization of culture and the persistence of local cultures around the world. Case studies from different regions of the world examine geographical processes that shape ways of life.

## GEO 273 - World Political Economy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Survey of emergence of an integrated global political economy from the sixteenth century to the present. Creation of "developed" and "underdeveloped" regions. Case studies of the impact of global transformations on regions and institutions.

## GEO 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s) At least $1 x$ fall or spring
Selected Topics
Repeatable

## GEO 311 - The New North Americas

## College of Arts and Sciences

3 credit(s) Irregularly
Critical study of social, political, economic, and cultural processes across contemporary North America. Focus on geographies of globalization, transnationalism, economic restructuring, and new social movements, with particular attention to race/ethnicity, gender, power, and resistance.

## GEO 313-The United States

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Cultural, social, and regional approaches to understanding the geography of the United States. American national identity and cultural landscape, regional consumer behavior patterns, and current regional issues.

## GE0 314 - Hazardous Geographic Environments

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Mapping and public policy for natural and technological hazards. Risk perception, geographic modeling, and vulnerability assessment. Mitigation measures, risk mapping, land-use restrictions, and emergency planning.

## GEO 316 - River Environments

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Characteristics of river environments, including hydroclimatology, floods, landforms, vegetation, human impacts, and resource management issues.

## GEO 317-Geography of Mountain Environments

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Physical and human geography of mountain regions. Focus on tectonic, geomorphological, biogeographical, and climatic processes; resource use problems and patterns, conservation, and development; environmental hazards.

## GEO 318-Tropical Environments

## College of Arts and Sciences

3 credit(s) Irregularly
Tropical ecosystems and their human dimensions, with an emphasis on the Neotropics. Distribution, structure, and function of natural systems;
human-environment interactions; management and significance.

## GEO 319 - Cold Environments

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
An exploration of environmental processes, interactions, and environmental problems in the cold regions of the world, emphasizing the Arctic.
PREREQ: GEO 155 AND (GEO 103 OR GEO
171 OR GEO 272)

## GEO 321 - Latin American Development: Spatial Aspects

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LAS 321
Spatial dimensions of development process in Latin America since the 1930s in a variety of contexts and at several scales. Variety of spatial models that may be applied.

## GEO 325 - Colonialism in Latin America

## College of Arts and Sciences

3 credit(s) Every semester
Processes of geographical change in Latin America from the sixteenth to the early twentieth century. Reconstruction of geographies of Latin America at critical periods.

## GEO 326 - The Geography of Climate and Weather

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Atmospheric dynamics emphasizing spatial distributions of energy and moisture at several scales. Weather phenomena, regional climates, and human-induced perturbations and modifications of climate systems. Land-use change, climate change and urban climatologies. PREREQ: GEO 155 OR EAR 101

## GE0 327-Geography of Coastal Environments

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Natural environmental processes in the coastal zone. Emphasis on coastal transformation due to climate variability and change, estuarine pollution and habitat destruction, human modification; and subsequent associated societal hazards and implications.
PREREQ: GEO 155

## GEO 331 - The European Union

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Geo- political foundations, economic and political developments, European community institutions,
integration and external relations.

## GEO 340 - Geography of Oil

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring The topic of oil used to explore the concerns of human geography with society, space, and the natural environment. By learning about oil we will cover themes and concepts important to environmental, political, cultural, economic and urban geography.

## GEO 347 - Art and Environment in American Culture Since 1800

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HOA 482
Visual arts and environmental concern in the U.S. from the early national period to the present. Emphasizing diversity of artists and forms, the changing cultural constructions of nature, and tracing an ecological tradition in art.

## GEO 353 - Geographies of Environmental Justice

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
The relationship between environmental quality and social justice. Spatial aspects of unequal distribution of environmental risks and benefits. Case studies drawn from urban rural examples in both the United States and the Third World.

## GEO 354 - American Environmental History and Geography

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HST 384
Relationship between Americans and the natural environment from the colonial period to the present. Ecological imperialism, technology and nature, resource-management conflicts, urban environments, development of conservation and environmentalism.

## GEO 356 - Environmental Ideas and Policy

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Fundamental ideas relating to underlying evolution and implementation of environmental policy in the USA.

## GEO 358 - Animals and Society

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Relations between people and animals employing approaches from the social sciences and humanities. Topics include history and geography of animals in America, managing wildlife, zoos,
animals in popular culture, pets and companion animals.

## GEO 360 - Sustainability Science and Policy

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: PSC 360
Examines sustainability science, communications, and public policy through the lens of climate-what is known about climate change and impacts, what motivates public understanding, and what actions through mitigation and adaptation make progress toward sustainability.

## GEO 361 - Global Economic Geography <br> \section*{College of Arts and Sciences}

3 credit(s) Irregularly
World patterns of production and consumption in the context of regional resources and population problems. Impact of technological change on geographic organization of economic systems. Concepts in economic geography and their policy implications.

## GEO 362 - The European City

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Historical development of Europe through its cities. Growth and form of European cities; how they are governed and planned.

## GEO 363 - Cities of North America

## College of Arts and Sciences

3 credit(s) Irregularly
Urban images and sense of place. Urbanization and urban growth. Urban functions and form. Social patterns, change, and transformations of urban landscapes. Housing, neighborhood, and land-use change.

## GEO 367 - Gender in a Globalizing World

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: ANT 367,WGS 367
Economic and cultural processes of globalization as they affect different groups of men, women, and households; including gender and work, development and environmental change, and redefinitions of masculinity and femininity across the globe.

## GEO 372 - Political Geography

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Geographic analysis of the political process at a variety of spatial scales - international, intra-national, and urban. Origins of territorial organization and conflicts over access to and use
of space.

## GE0 374 - Environment and Development in the Global South

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Critical analyses of international development in theory and practice, especially as it relates to environmental change in complex ways in the Global South. Topics include modernization, participation, community, gender, sustainability, agriculture, trade, water, climate change.

## GEO 381 - Cartographic Design

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Basic elements of cartographic design, including symbolization, figure-ground relationships, color theory, and typography. Effect of scale and projection on design process. Computer-assisted methods of cartographic design, including graphic representations for geographic information systems.

## GEO 383-Geographic Information Systems

## College of Arts and Sciences

3-4 credit(s) Every semester Double Numbered with: GEO 683 Basic concepts in spatial data handling. Algorithms and data structures for Geographic Information Systems (GIS). Demonstration of power, potential, and limitations of GIS. Graduate students register for three credits. Undergraduate students register for four credits with required laboratory work.

## GEO 386 - Quantitative Geographic Analysis

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: GEO 686
Descriptive and inferential statistics for use georeferenced data, spatial autocorrelation, and geostatistics. Geographic examples. Weekly labs. Individualized advanced work and term project. PREREQ: MAT 121 OR MAT 183 OR MAT 221 OR STT 101

## GEO 388 - Geographic Information and Society

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: GEO 688
Effects of geographic information technologies on governments, communities, and individuals. Mapping as an information industry, a political process, a surveillance technology, and a communication medium. Copyright, access, hazard management, national defense, public
participation, and privacy.

## GEO 396 - European Integration

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PSC 396
Focuses on the origins, nature, and likely future course of the European Union. More generally, examines five long-range challenges facing contemporary Europe: Demographic decline; globalization; Civic Integration; Great Power Rivalry; and Sustainable Development.

## GEO 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## GEO 405 - Conservation and Management Protected Areas: South Africa-OTS

## College of Arts and Sciences

4 credit(s)
Crosslisted with: ANT 405
Taught in South Africa through the Organization for Tropical Studies program. Analyze management of wildlife and natural resources within ecological, political, social, historical, and economic context of South Africa.

## GEO 415 - Food: A Critical Geography

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Critical examination of the social, political and environmental aspects of contemporary agri-food systems. Topics include industrial and alternative agriculture, fisheries, food policy, hunger, health issues and food justice. Involves field-based and mapping assignments.

## GEO 425 - South Africa

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The geography, history, and societal complexity of South Africa. Its current place in the world, its parallels and lessons for the USA.

## GEO 428 - Auld Reekie: Scotland and the Road to London

## College of Arts and Sciences

3 credit(s) Irregularly
Field studies seminar examining popular and elite cultural forms that organize life in Britain. Emphasizes interaction with local culture environments to explore contemporary identities and how and why identity and attitude are formed. Offered in London only.

GEO 430 - Energy, History and Society<br>College of Arts and Sciences<br>3 credit(s) Irregularly<br>Explores the role of energy resources in shaping historical, social, and political change.

## GEO 440 - Race and Space

## College of Arts and Sciences

3 credit(s) Irregularly
Critical geographic study of race and racism as formative aspects of sociocultural, economic and political processes. Focus on race/racism's operations across scales, with particular attention to gender, class, culture, colonialism, citizenship, power, and resistance.

## GEO 450 - Geographies of Migration and Mobility

College of Arts and Sciences
3 credit(s) Irregularly
This course examines human migration and its sociocultural and political impacts on sending and receiving communities. Focused on the mobility of people, ideas, and commodities, it investigates migration's role in producing and transforming human geographies.

## GEO 455 - Biogeography

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: GEO 655
Exploration of the environmental factors that influence the distribution of organisms. Emphasis is on plant distributions and dynamics, and consideration includes both natural and human factors. Additional work required of graduate students.

## GEO 463 - Geography of Homelessness

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Examines the roots and consequences of homelessness in contemporary cities. Focus on United States and globalization of American-style homelessness. Explores role of space and spatial relationships in shaping homeless people's lives and homeless policy.

## GEO 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Irregularly
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## GEO 482 - Environmental Remote Sensing

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Principles and environmental applications of remote sensing. Uses and limitations of remotelysensed data; typical image processing operations and analyses; laboratory work and individual term project using remotely-sensed imagery.

## GEO 484 - GIS for Urban Environments

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Double Numbered with: GEO 684
Advanced GIS methods for the study of urban environments and systems. Emphasis on practical and applied uses of GIS, project management and spatial analysis. Laboratory exercises, case studies, and course projects use real world data. Additional work required of graduate students. PREREQ: GEO 383

## GEO 485 - Community Geography

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: GEO 685
Introduces community-based and participatory research methods and participatory GIS, including origins, ethics and challenges. Examines how and why grassroots organizations use GIS and geospatial technologies. Students conduct local research projects. Additional work required of graduate students.

## GEO 489 - Practicum in Community Geography

## College of Arts and Sciences

## 1-3 credit(s) Every semester

Double Numbered with: GEO 689
Supervised 135 hour internship in communitybased participatory action research. Students work across disciplines and collaborate with community-based organizations to conduct geographic research on contemporary community issues. Additional work required of graduate students. Permission to enroll required. Repeatable 3 time(s), 12 credits maximum

## GEO 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## GEO 491 - Senior Seminar in Geography

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Research and presentations in a selected field of geography. Topic announced each time offered. Primarily for advanced geography majors and minors.
PREREQ: GEO 103 AND GEO 155 AND GEO 171
Repeatable

## GEO 492 - Senior Thesis Seminar

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Seminar for senior geography majors graduating with distinction. Individualized and small-group mentoring and directed research.

## GEO 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## GEO 500 - Topics in Geography

## College of Arts and Sciences

1-6 credit(s) At least 1x fall or spring In-depth studies of selected topics. Repeatable

## GEO 537 - Environmental Policy in a Development Context

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: LAS 537
Offered only in Santiago. Examines historical/ intellectual/ material processes that transformed nature into natural resources to be exploited; ways global political process has guided global responses to environmental problems; Chilean environmental policy over the last 20 years.

## GE0 561 - Global Economic Geography

## College of Arts and Sciences

3 credit(s) Irregularly
Globalization, world economic processes, international development, and policy issues; emphasizing geographical perspectives.

## GEO 563 - The Urban Condition

College of Arts and Sciences
3 credit(s) Irregularly
Contemporary cities. Economic growth and decline. Social polarization. Construction of the built environment. Case studies from around the world.

## GEO 564 - Urban Historical Geography

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Cities in western civilization through classical, medieval, mercantile, and industrial eras to 1945. Historical geographic meanings of urbanism; social construction of the built environment; and relationships between power, social justice, and urban spatial form.

## GE0 572 - Landscape Interpretation in Cultural Geography

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Contemporary theories and methods. Traditional, historical-materialist, postmodernism, and poststructuralist approaches to landscape. Additional work required of graduate students.

## GEO 573 - The Geography of Capital

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 In-depth reading of Marx's Capital to understand: (a) the relationship between political economy and the geographical landscape; (b) the formative role of "Capital" in contemporary geographic theory.

GEO 576 - Gender, Place, and Space
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: WGS 576
Contemporary debates in feminist geography on the gendered construction of space and the spatial construction of gender.

## GEO 580 - Research on Cartographic Techniques <br> College of Arts and Sciences <br> 1-12 credit(s) Irregularly <br> Reading and special work. <br> Repeatable

## GEO 583 - Environmental Geographical Information Science

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Data types, collection techniques, and processing strategies in natural resource survey. Monitoring and environmental sciences. Basic concepts of GIS data structures and algorithms. Data quality issues. User requirements, management aspects, and implementation experience.
PREREQ: GEO 383 OR 683
GE0 595-Geography and the Internet
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
An introduction to the structure and functions
of the Internet and its impact on spatial relations from the global to the local. A detailed examination of the World Wide Web and practical training in web page design.

## German

## GER 101 - German I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in German. No prior experience or admission by placement testing. Students cannot enroll in GER 101 after earning credit for GER 102, GER 201, GER 202, or higher. PREREQ: REQUIRED PLACEMENT EXAM SCORE

## GER 102 - German II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in German. Students cannot enroll in GER 102 after earning credit for GER 201, GER 202, or higher. PREREQ: GER 101 OR REQUIRED PLACEMENT EXAM SCORE

## GER 201 - German III

## College of Arts and Sciences

4 credit(s) At least 1 x fall or spring Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in German. Students cannot enroll in GER 201 after earning credit for GER 202 or higher.
PREREQ: GER 102 OR REQUIRED PLACEMENT EXAM SCORE

## GER 202 - German IV

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course which focuses on reading, discussing, and analyzing authentic texts as a basis for the expression and interpretation of meaning. Conducted in German. Students cannot enroll in GER 202 after earning credit for a course higher than GER 202.
PREREQ: GER 201 OR REQUIRED PLACEMENT EXAM SCORE

## GER 306 - German Composition and Conversation

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Provides increasing facility in idiomatic use of
spoken and written language.

## GER 340 - German Fairy Tales: Past and Present

## College of Arts and Sciences

3 credit(s) Irregularly
The course explores fairy tales from the Brothers Grimm to contemporary forms of the genre in the original language. Focus on definition, stylistics, origins, development and politics of German fairy tales.
Repeatable 1 time(s), 6 credits maximum

## GER 356 - German Culture and Civilization

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Area survey of social and cultural phenomena: literature, philosophy, music, and art. Practice in speaking, composition, and aural comprehension.

## GER 357 - Contemporary German Culture and Civilization

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Survey and analysis of developments in the arts and literatures and in the political, educational, and social systems in the G.D.R. and the F.R.G. since 1945.

## GER 361 - Berlin: City - Literature History

## College of Arts and Sciences

3 credit(s) Irregularly
The course explores the representation of Berlin in German literary texts from the early 20th century to the present. Focus on major historical shifts: Weimar Republic, Third Reich, Divided Berlin, Fall of the Berlin Wall.

## GER 365 - Nineteenth-Century Prose

## College of Arts and Sciences

3 credit(s)
The rise of realism as manifested particularly in the years 1830-1880. Lectures, discussion, short papers. Offered alternate years.

## GER 366 - Nineteenth-Century Drama

## College of Arts and Sciences

3 credit(s)
Drama and dramatic theory between 1830 and 1880. Leading works by Büchner, Hebbel, Wagner, Grillparzer. Lectures, discussion, short papers. Offered alternate years.

## GER 367 - German Lyrics and Ballads

## College of Arts and Sciences

3 credit(s)
Offered alternate years.

## GER 376-Classicism and <br> Romanticism <br> College of Arts and Sciences <br> 3 credit(s)

Literary works and criticism of later Goethe and Schiller. The writings of such Romantic authors as the Schlegels, Tieck, Novalis, E.T.A. Hoffmann. Lectures, discussion, short papers. Offered alternate years.

## GER 377 - Literature from 1880 to the Close of World War II

## College of Arts and Sciences

3 credit(s)
Important writers of prose, drama, and lyric between 1880 and 1945. Schnitzler, Hofmannsthal, Kafka, Hesse, Mann, Brecht. Lectures, discussion, short papers. Offered alternate years.

## GER 378 - German Literature Since World War II

## College of Arts and Sciences

3 credit(s)
Important poets, dramatists, and prose writers after 1945. Includes Böll, Grass, Frisch, Durrenmatt. Lectures, discussion, short papers. Offered alternate years.

## GER 379 - German and Austrian

 Cinema
## College of Arts and Sciences

3 credit(s) Irregularly
Explores and analyzes early and modern German and Austrian films. Conducted in German. The content of the course varies from semester to semester. Lecture, discussion for each film Repeatable 1 time(s), 6 credits maximum

## GER 580 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Greek

## GRE 101 - Ancient Greek I

College of Arts and Sciences
4 credit(s) At least 1x fall or spring Introductory course which prepares students to acquire a reading knowledge of Classical Attic
Greek, focusing on morphology and syntax, and
its role in the culture and literature of ancient Greek society. No prior experience or admission by placement testing. Students cannot enroll in GRE 101 after earning credit for GRE 102, GRE 201, GRE 202, or higher.

## GRE 102 - Ancient Greek II

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Continuing course with emphasis on morphology and syntax. Introduction to examples of unsimplified Ancient Greek prose of the classical period, read and interpreted within the cultural context of ancient Greek society. Students cannot enroll in GRE 102 after earning credit for GRE 201, GRE 202, or higher.
PREREQ: GRE 101

## GRE 201 - Ancient Greek III

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Continuing course with review of morphology and syntax and further study of idioms, rhetorical figures, and syntactic peculiarities. Reading and study of representative prose authors. Students cannot enroll in GRE 201 after earning credit for a course higher than GRE 201.

## GRE 310 - Greek Prose Authors

## College of Arts and Sciences

3 credit(s)
Readings from selected ancient Greek prose authors. Review of grammar and syntax.
PREREQ: GRE 102
Repeatable 2 time(s), 9 credits maximum

## GRE 320 - Readings from Greek Poets

College of Arts and Sciences
3 credit(s)
Readings from selected ancient Greek poets.
Review of grammar and syntax. Greek metrics and prosody.
Repeatable 2 time(s), 9 credits maximum

## GRE 410 - Advanced Greek Prose

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Readings from selected Greek prose authors.
PREREQ: GRE 310 OR GRE 320

## GRE 420 - Advanced Greek Poetry

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Readings from selected Greek poets.
PREREQ: GRE 310 OR GRE 320

## GRE 500 - Greek Prose Authors

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Readings from selected Greek prose authors.

## Repeatable

## Hebrew

## HEB 101 - Hebrew I

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Hebrew. No prior experience or admission by placement testing. Students cannot enroll in HEB 101 after earning credit for HEB 102, HEB 201, HEB 202, or higher. PREREQ: REQUIRED PLACEMENT EXAM SCORE

## HEB 102 - Hebrew II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Hebrew. Students cannot enroll in HEB 102 after earning credit for HEB 201, HEB 202, or higher. PREREQ: HEB 101

## HEB 201 - Hebrew III

## College of Arts and Sciences

4 credit(s) At least 1 x fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Hebrew. Students cannot enroll in HEB 201 after earning credit for HEB 202 or higher.
PREREQ: HEB 102

## HEB 202 - Hebrew IV

## College of Arts and Sciences

4 credit(s) At least 1 x fall or spring Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Hebrew. Students cannot enroll in HEB 202 after earning credit for a course higher than HEB 202.
PREREQ: HEB 201

## HEB 301 - Advanced Hebrew I

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: JSP 301
Hebrew literature in the original, ranging from the Bible to contemporary fiction, including 19th-century works such as Hasidic tales and Enlightenment satires.
PREREQ: HEB 202

Repeatable 1 time(s), 6 credits maximum

## HEB 303 - Advanced Hebrew II

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: JSP 303
Continuation of HEB/JSP 301, using more advanced texts

HEB 401 - Hebrew Literature in the Original

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: JSP 401
The course retraces the history of Hebrew writing in Europe and Palestine before 1948
PREREQ: HEB 301

## HEB 480 - International Course

College of Arts and Sciences
1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Hindi

## HIN 101 - Hindi/Urdu I

College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Crosslisted with: SAS 101
Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 101 after earning credit for HIN/SAS 102, HIN/SAS 201, HIN/SAS 202, or higher.

## HIN 102 - Hindi/Urdu II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Crosslisted with: SAS 102
Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 102 after earning credit for HIN/SAS 201, HIN/ SAS 202, or higher.
PREREQ: HIN 101

## HIN 201 - Hindi/Urdu III

College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Crosslisted with: SAS 201

Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 201 after earning credit for HIN/SAS 202 or higher.
PREREQ: HIN 102

## HIN 202 - Hindi/Urdu IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Crosslisted with: SAS 202
Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 202 after earning credit for a course higher than HIN/SAS 202.
PREREQ: HIN 201

## HIN 280 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Honors Program

## HNR 100 - Honors Orientation Seminar

## College of Arts and Sciences

1 credit(s) Every semester
Intellectual enrichment, fostering academic pursuits, and introduction to the world of ideas. Repeatable

## HNR 210 - Arts in Society Seminar

## College of Arts and Sciences

1 credit(s) Every semester
Experience-based introduction to the arts in the city of Syracuse, such as opera, symphony, stage, and visual art.
Repeatable

## HNR 220 - Seminar: Political Culture and Practice

## College of Arts and Sciences

1 credit(s) Every semester
Civic literacy. Concepts and analysis of ideology and political socialization. Students attend public meetings and evaluate the role of ideology in public deliberation.
Repeatable

## HNR 230 - Seminar: Scientific Issues and Practice

## College of Arts and Sciences

1 credit(s) Every semester
Topics will vary. Introduces selected scientific concepts and controversies of current general interest.
Repeatable

## HNR 240 - Topics in the Humanities Honors

## College of Arts and Sciences

3 credit(s) Every semester
Selected topics in the humanities to vary for Honors students. Honors student or permission of instructor.
Repeatable 2 time(s), 9 credits maximum

## HNR 250 - Topics in the Natural Sciences and Mathematics Honors

## College of Arts and Sciences

3 credit(s) Every semester
Selected topics in the natural sciences and mathematics to vary for honors students. Honors student or permission of instructor.
Repeatable 2 time(s), 9 credits maximum

## HNR 255 - Topics in the Sciences with Laboratory Component

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Selected topics in the sciences, with laboratory component. Topics will vary. Repeatable

## HNR 260 - Topics in the Social Sciences Honors

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Selected topics in the social sciences to vary for Honors students.
Repeatable 2 time(s), 9 credits maximum

## HNR 309 - Capstone Project Planning Seminar <br> College of Arts and Sciences <br> 1 credit(s) Every semester <br> Selection and refining of Honors Capstone Project topic; securing advisor; initiating research.

## HNR 340 - Topics in the Humanities

 HonorsCollege of Arts and Sciences
3 credit(s) Every semester
Selected topics in the humanities to vary for Honors students.
Repeatable 2 time(s), 9 credits maximum

HNR 350 - Topics in the Natural Sciences and Mathematics Honors

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Selected topics in the natural sciences and mathematics to vary for honors students.
Repeatable 2 time(s), 9 credits maximum
HNR 355 - Topics in the Sciences with Laboratory Component
College of Arts and Sciences
3 credit(s) Irregularly
Selected topics in the sciences, with laboratory component. Topics will vary.
Repeatable

## HNR 360 - Topics in the Social Sciences Honors

College of Arts and Sciences
3 credit(s) Every semester
Selected topics in the social sciences to vary for Honors students.
Repeatable 2 time(s), 9 credits maximum

## HNR 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HNR 401 - Honors Orientation Seminar Junior Assistant Experience

College of Arts and Sciences
1 credit(s) At least 1x fall or spring
Serve as an assistant for an HNR 100 Orientation
Seminar; assist the faculty leader in guiding discussion and planning and implementing various aspects of the seminar. May be taken three times for credit.
Repeatable 2 time(s), 3 credits maximum
HNR 440 - Topics in the Humanities Honors

## College of Arts and Sciences

3 credit(s) Irregularly
Selected topics in the Humanities to vary for Honors students.
Repeatable 2 time(s), 9 credits maximum

## HNR 450 - Topics in the Natural <br> Sciences and Mathematics Honors <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Selected topics in the natural sciences and mathematics to vary for honors students. Repeatable 2 time(s), 9 credits maximum

## HNR 455 - Topics in the Sciences with Laboratory Component <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Selected topics in the sciences, with laboratory component. Topics will vary. <br> Repeatable

## HNR 460 - Topics in the Social Sciences Honors

College of Arts and Sciences
3 credit(s) Irregularly
Selected topics in the social sciences to vary for Honors students.
Repeatable 2 time(s), 9 credits maximum

## History of Art

## HOA 100 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOA 105 - Arts and Ideas I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Visual arts in relation to broader cultural, historical, and intellectual contexts.HOA 105 surveys the ancient world to the High Renaissance. HOA 106 proceeds from the late Renaissance to the present. Either course may be taken first or independently.

## HOA 106 - Arts and Ideas II

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Visual arts in relation to broader cultural, historical, and intellectual contexts. HOA 105 surveys the ancient world to the High Renaissance. HOA 106 proceeds from the late Renaissance to the present. Either course may be taken first or independently.

## HOA 121 - Italian Art and Society from Ancient to Modern Times

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Offered only in Florence for Discovery Florence students. Introduction to the study of art history through some of the world's most famous buildings, sculptures and paintings, and examination of their corresponding cultural contexts.

## HOA 176 - The Visual Arts of the Americas

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5 The visual arts in the Americas (South, Central, and North America) from contact to the present, emphasizing diversity of makers and media, as well as exchanges among cultural traditions.

## HOA 200 - Selected Topics

## College of Arts and Sciences

1-3 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOA 201 - Masterpieces of Art

## College of Arts and Sciences

3 credit(s) Irregularly
Major works of painting, sculpture, architecture, and decorative arts related by theme, period, or country. Sometimes offered abroad.

## HOA 202 - Arts of Italy

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Crosslisted with: HOM 202
Selected aspects, drawing on appropriate resources in architecture, museums, and/or musical performance in immediate geographical area. Offered only in Florence. Specific topics determined each semester.

## HOA 203 - Italian Arts from Antiquity to Michelangelo

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The visual arts in relation to broader cultural, historical, intellectual contexts from ancient times through the High Renaissance. Site visit to Rome and selected "all-school" field trips. Offered only in Florence.

## HOA 204 - Italian Arts from the Medicis to the Futurists

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The visual arts in relation to broader cultural, historical, intellectual contexts from the Renaissance through the late 19th century. Site visit to Rome and selected field trips. Offered only in Florence.

## HOA 205 - Italian Sculpture Interpreted

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Masterpieces of Italian sculpture from antiquity
to present, including works by Donatello, Michelangelo, Bernini, and Canova. Lectures alternate with weekly site visits. Trips to Carrara, Pisa, Verona, and Rome. Offered only in Florence.

## HOA 206 - Arts of France

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: HOM 206
Selected aspects, drawing on appropriate resources in architecture, museums, and/or musical performance in immediate geographical area. Offered only in Strasbourg. Specific topics determined each semester.

## HOA 207 - Arts of England

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HOM 207
Selected aspects, drawing on appropriate resources in architecture, museums, and/or musical performance in immediate geographical area. Offered only in London. Specific topics determined each semester.

## HOA 208 - An Architectural History of London

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The growth of London from the Norman Conquest to the present. Accent on important architectural areas, including the Guildhall, Westminster, Covent Garden, South Bank. Offered only in London.

## HOA 209 - Arts of Spain <br> College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: HOM 209
Introduction to the art, architecture, music, and dance of Spain. Museum, gallery, and site visits. Concert, dance, and other performances. Topics vary. Offered only in Madrid.

## HOA 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOA 301-Origins of Western Art

## College of Arts and Sciences

3 credit(s) Irregularly
Development of art in Europe, the Near East, Egypt, and the Aegean to the close of the Bronze Age. Paleolithic painting and sculpture. Megalithic structures, rise of Egyptian civilization. Growth of Minoan and Mycenean cultures.

## HOA 302-Greek Art and Architecture

## College of Arts and Sciences

3 credit(s) Irregularly
Works of Greek art and architecture are examined in their historical, social, and cultural contexts, from the Archaic to the Hellenistic Period.
PREREQ: HOA 105

## HOA 303 - Etruscans and Romans: Ancient Art and Society in Italy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ANT 422
Explores art and society of ancient Italy from ca. 1000 B.C. to A.D. 138 , with special emphasis on the early Etruscans through Rome under Hadrian. Requires previous course in art history. Offered only in Florence.
PREREQ: ANY HOA 100-HOA 499

## HOA 304 - Roman Art \& Architecture

## College of Arts and Sciences

3 credit(s) Irregularly
A history of Italian painting, architecture, and sculpture from the early Etruscans through that of Rome under Hadrian.
PREREQ: HOA 105

## HOA 311 - Italian Medieval Art

## College of Arts and Sciences

3 credit(s) Irregularly
Arts of the Italian peninsula and Sicily during the Romanesque and Gothic periods; architecture, sculpture, mosaic, minor arts.
PREREQ: HOA 105

## HOA 312-Romanesque Art

## College of Arts and Sciences

3 credit(s) Irregularly
European art and architecture of the 11th and 12th centuries explored in their cultural, social, and artistic contexts.
PREREQ: HOA 105

## HOA 313 - Gothic Art

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
French arts from the beginning of the Gothic style
through its maturity: architecture, sculpture, and
stained glass.
PREREQ: HOA 105

## HOA 322 - Early Renaissance

Architecture in Italy 1400-1529

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ARC 335
Architectural theory and design in Italy, 14001520. Additional work required of graduate
students.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 323 - Sixteenth Century Italian Architecture

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: ARC 332
Major architects and theories of 16th-century architecture, emphasis on social and political background, patronage, and the education of the architect. Additional work required of graduate students.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 324 - Italian Seventeenth Century Architecture

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ARC 336
Complex and masterful accomplishments of individual architects within context of a mature architectural tradition and a particular social, economic, and religious milieu. Additional work required of graduate students.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 340 - Studies in Baroque Art

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Rubens, Rembrandt, El Greco, Velázquez, Bernini, Caravaggio, and their contemporaries. Offered only in London.
PREREQ: HOA 106

## HOA 350 - Art in Eighteenth Century Europe

## College of Arts and Sciences

3 credit(s) Irregularly
Work relating to profound cultural changes of the period. Watteau, Fragonard, Boucher, Chardin, Reynolds, Gainsborough, and Tiepolo.
PREREQ: HOA 106

## HOA 360 - Art and Identity

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Social and ethical dimension of art in our times and since the nineteenth century: art and the state, avant-garde traditions, public art battles, museum politics, representing gender, outsider art, ethnic expression.
PREREQ: HOA 105 OR HOA 106

## HOA 365 - Art in France from Impressionism to Surrealism

College of Arts and Sciences
3 credit(s)
Crosslisted with: FRE 439
Focus on major painters who lived and worked in

Paris from 1860 to 1945. Emphasis on analyzing and writing about painting. Field trip to Paris. Conducted in French. Offered in Strasbourg only. PREREQ: FRE 202

## HOA 366 - Nineteenth \& Twentieth Century Italian Art

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Development of Italian painting and sculpture from neoclassicism to the present. Offered only in Florence.
PREREQ: HOA 106
HOA 371 - Photography \& the Fine Arts

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Still photography as a means of pictorial expression in the fine arts from 1840 to the mid-20th century. Interrelationships among photography, painting, and other visual arts. PREREQ: HOA 106

## HOA 372 - The Business of Art

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to the practice and strategies of art as a tradable commodity. Topics include ethics of collecting, investment strategies, conservation and preservation of art, and art-related crime with its impact on the art market. Offered in London only.

## HOA 374 - American Architecture, Settlement to 1860

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: ARC 337
American architectural history and theory from first settlements through federal and Georgian to various revival modes. Additional work required of graduate students.
PREREQ: ARC 211

## HOA 375 - American Architecture, 1860 - World War I

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: ARC 338
American architectural history and theory from the Civil War through various revival modes to development of new commercial and residential forms before World War II. Additional work required of graduate students.
PREREQ: ARC 134 OR CAS 134

## HOA 377 - Nineteenth-Century American Art

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
The visual arts in the U.S. from the American

Revolution to the Armory Show (1775-1913). PREREQ: HOA 105 OR HOA 106 OR HOA 176

## HOA 378 - Twentieth-Century American Art

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
The visual arts in the U.S. from the World's Columbian Exposition (1893) to the present. PREREQ: HOA 105 OR HOA 106 OR 276 OR HOA 377

## HOA 380 - International Course

## College of Arts and Sciences

1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HOA 386 - Art of the Black World

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 361
Arts of the African Diaspora. Emphasis on African American Art. Seventeenth century to present. Gender, socioeconomic, political and cultural contexts. Artistic implications of Black culture in comparative perspective with other artists and artistic movements.

## HOA 387 - Native North American Art

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 346
Critical exploration of meanings, functions, techniques, and varieties of art in Native North American cultures, ancient to present. Attention to continuities, changes, and cultural exchanges; anthropological vs. art historical perspectives: limitations of term "art."

## HOA 389 - Islamic Architecture

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARC 435
Major building traditions of Islam in the Middle East, North Africa, Spain, Turkey, and India elucidated through in-depth examination of major works and principles of architectural, urban, and garden design. Additional work required of graduate students.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 391 - Survey of Asian Art

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Major masterpieces of Indian, Chinese, Korean, Japanese art and architecture from prehistoric times to the present. Influence of Asian art on modern artists in the West, including Chinoiserie and Japonisme. Comparison of Eastern/Western aesthetics also considered.

## HOA 392 - The Arts of China

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring A chronological survey of the arts and visual culture of China. Major works of art and the material culture that surrounded them, from the Neolithic era to the present.

## HOA 396 - Art and Architecture of India

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ARC 331, SAS 396
Art and architecture of the Indian subcontinent from the Indus Valley Civilization to the present.

## HOA 400 - Selected Topics

## College of Arts and Sciences

$1-6$ credit(s) At least 1x fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOA 405 - The Mediterranean City: Architecture, Ritual and Power

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Examines a series of ritual sites around the Mediterranean basin; architecture, choreography, politics, considering innovation and continuity in the design, use , and abuse of mass spectacle as a tool for social identity. Offered only in Florence. PREREQ: ANY HOA 100 LEVEL OR ABOVE

## HOA 410 - Art and Ideology in Medieval Spain

## College of Arts and Sciences

3 credit(s) Irregularly
Examines works of art and architecture from Medieval Spain, within their multicultural Christian/Islamic/Jewish context. Emphasizing their ideological value as vehicles for identity, authority, and spiritual ideals.
PREREQ: HOA 105

## HOA 411 - The Black Death and Medieval Art: Catastrophes and Cultural Change <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Painting and sculpture from 1260 to 1380, the effects of the Bubonic Plague (1348) as manifested in art. Day trips to Padua and San Gimignano; site visits in Florence. Offered only in Florence. <br> PREREQ: ANY HOA 100-499 OR HST 355

## HOA 412 - The Gothic Spell

College of Arts and Sciences
3 credit(s) Irregularly
Exploration of the definition, meaning, and appeal of the Gothic through the ages, Gothic being understood as an architectural language, a literary and film genre, and a Pop subculture.

## HOA 413 - Gothic Art in Italy

College of Arts and Sciences
3 credit(s) Irregularly
Introduction of the Gothic style into Italy in the 12th and 13th centuries: architecture, monumental sculpture, and stained glass of the Cistercians, the mendicant orders, and the great civic cathedral projects.
PREREQ: HOA 105

## HOA 419 - The City in Architectural History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARC 432
A single city throughout its history, or various cities at a particular time in history. Additional work required of graduate students. Additional work required of graduate students.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 420 - Fifteenth-Century Italian Art: Inventing the Renaissance

College of Arts and Sciences
3 credit(s) Irregularly
Explores the new developments in 15th century Italian visual culture that became the defining characteristics of the early Renaissance period.
Requires previous course in art history or one course in Renaissance history. Offered only in Florence.
PREREQ: HOA 105

## HOA 421 - Early Renaissance Art

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Visual arts in Italy during the 14th and 15th centuries. Sometimes offered abroad.
PREREQ: HOA 105

## HOA 422 - High Renaissance Art/ Mannerism

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Origins of High Renaissance style in Florentine art of the late quattrocento: Leonardo, Michelangelo, Fra Bartolomeo, Roman High Renaissance style, Giorgione, and Titian. Concept of the maniera. Sometimes offered abroad.
PREREQ: HOA 105

## HOA 423 - Artistic Patronage of Medici

## College of Arts and Sciences

3 credit(s) Irregularly
How the Medici family used art and architecture to transform themselves from private bankers into Grand Dukes of Tuscany, in the process creating the monuments by which we define the Italian Renaissance. Offered only in Florence.
PREREQ: HOA 105

## HOA 424 - Sixteenth Century Italian Art and Identity

## College of Arts and Sciences

3 credit(s) Irregularly
Explores how, during the "High Renaissance", works of art were commissioned by patrons using art to create their own public identity. Focuses on paintings and sculpture. How artists defined themselves in relation to Leonardo and Michelangelo. Requires previous course in art history or in any aspect of Renaissance history or culture. Offered only in Florence.
PREREQ: HOA 105

## HOA 425 - Leonardo da Vinci: Artist and Engineer

## College of Arts and Sciences

4 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: ECS 441
Interdisciplinary exploration of the life and work of Leonardo da Vinci (1452-1519). Supplemented by required field trip to Europe. Special application required.
PREREQ: HOA 105

## HOA 426 - Michelangelo' Italy

## College of Arts and Sciences

4 credit(s) Even Academic Yr e.g. 2004-5 Exploration of the life and times of Michelangelo Buonarroti (1475-1564). Supplemented by required field trip to Italy. Special application required.
PREREQ: HOA 105

## HOA 428 - Research Problems in Italian Art

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring

Major decorative complexes in Italy from medieval, Renaissance, and baroque periods. Factors that affected their form. Architectural spaces in churches and palaces of Florence. Offered only in Florence.
PREREQ: HOA 340 OR HOA 421 OR HOA 422

## HOA 430 - Northern Renaissance Art: 15th Century

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Northern European painting, sculpture, and printmaking from the international style in the fourteenth century to Hieronymus Bosch in the late 15th century. Art presented in historical, philosophical, and social contexts of the Northern humanist tradition.
PREREQ: HOA 105

## HOA 431 - Northern Renaissance Art: 16th Century

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Northern European painting and printmaking of the sixteenth century, beginning with Albrecht Dürer and concluding with Pieter Breughel. Art presented in the context of protestant reformation and northern humanism.
PREREQ: HOA 105

## HOA 439 - French Architecture, Sixteenth and Seventeenth Centuries

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ARC 433
Architecture of the Renaissance transported from Italy to France and developed into a specifically French architecture. Outstanding achievements of more than local interest. Additional work required of graduate students.
PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 440 - Women in Art

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 449
Representation of women in art from prehistoric to contemporary times and the works of women artists in historical contexts.
PREREQ: HOA 105 OR HOA 106 OR WGS 101

## HOA 445 - Baroque Art in Southern Europe

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Painting and sculpture in Italy and Spain during the 17th century; Caravaggio, the Carracci, Bernini, Poussin, Lorrain, and Velázquez. PREREQ: HOA 106

## HOA 446 - Baroque Art in Northern Europe

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Painting and sculpture in Belgium, Holland, and France during the seventeenth century; Rubens, VanDyck, Jordaens, Hals, Rembrandt, Vermeer, Ruisdael, the Le Nains, and Georges de la Tour. PREREQ: HOA 106

## HOA 447 - Italian Baroque Art and Architecture

## College of Arts and Sciences

3 credit(s) Irregularly
Architecture, sculpture, painting, and decorative arts of the Italian Baroque: early, high, and late Baroque styles in Florence, Bologna, Rome, and Venice. Site visits in Florence and study tours of Bologna and Rome. Offered only in Florence. PREREQ: HOA 106

## HOA 457 - Art and Revolution

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Revolution as a dominant cultural force in nineteenth century art. Topics chosen from romanticism and nature, revolutionary France, ideal vision, science and technology. Gothic revival, and impressionism and shaped around current major art exhibits. Offered only in London. PREREQ: HOA 106

## HOA 458 - Art of Romanticism

College of Arts and Sciences
3 credit(s) Irregularly
Revival movements, landscape painting, romanticism, and realism. Developments from David to Courbet. Sometimes offered abroad. PREREQ: HOA 106

## HOA 459 - Realism to Symbolism:

 European Art, 1850-1900College of Arts and Sciences
3 credit(s) Irregularly
Modernism from the politics of Courbet and the revolutions of 1848 to Munch and social anxiety as the 19th century draws to a close. Realism, Impressionism, Post-Impressionism, Symbolism. PREREQ: HOA 106

## HOA 461 - Early 20th Century Art

## College of Arts and Sciences

3 credit(s) Irregularly
Fauvism and expressionism to cubism and the development of abstraction. Matisse, Picasso, Brancusi, Mondrian, and Kandinsky.
PREREQ: HOA 106

## HOA 462 - European Art Between the Wars

## College of Arts and Sciences

3 credit(s) Irregularly
Dada, Surrealism. The utopian movements of Russian Constructivism, the Bauhaus in Germany, and De Stijl in Holland. Movements in art between the wars in the context of political instability, revolution, utopian idealism, the machine aesthetic, and the developing history of the unconscious mind.
PREREQ: HOA 106

## HOA 463-Modernism \& Postmodernism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Trends in twentieth-century art, Postimpressionism, cubism, surrealism. Abstract expressionism. Postmodernism. Shaped around current major art exhibits. Offered only in London.
PREREQ: HOA 106

## HOA 464 - Modern Spanish Art

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SPA 364
Spanish art and architecture from the late eighteenth century to the present. Goya, succeeding styles and movements to the modernism of Picasso, Miro, and Dali, and later styles. The architecture of Gaudi. Offered only in Madrid.
PREREQ: SPA 201 OR SPA 202 OR (SPA 300 OR ABOVE)

## HOA 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## HOA 473 - London Museums: Art, History and Science in Contemporary Culture

## College of Arts and Sciences

3 credit(s) Every semester
A survey of London museums that examines not only the collections, architecture, and approaches to interpretation of these institutions of culture, but also considers wide-ranging contemporary issues within the larger museum world. Offered only in London.

## HOA 475 - Modern Architecture: The International Style to Present

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARC 436
Architecture of the modern period since World War
II. Major works and figures as framed by the larger architectural issues of the period. Additional work required of graduate students.
PREREQ: HOA 105 OR HOA 106 OR ARC 134 OR CAS 134

## HOA 479 - Early Modern Architecture

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ARC 431
Early modern architecture from the 1890s through the 1930s. Additional work required of graduate students.
PREREQ: HOA 105 OR HOA 106 OR ARC 134 OR CAS 134

## HOA 482 - Art and Environment in American Culture Since 1800

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: GEO 347
Visual arts and environmental concern in the U.S. from the early national period to the present. Emphasizing diversity of artists and forms, the changing cultural constructions of nature, and tracing an ecological tradition in art.

## HOA 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## HOA 491 - History of Japanese Design: Studies in Material Culture

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: ART 411
Survey of design in Japan (pre-historical times to present), and influence of Japanese design on the West. Examines works in different media and situates these within a historical and cultural context.
PREREQ: ART 113

## HOA 498 - Senior Seminar: Research and Professional Practice

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Research, writing, and career exploration for
senior art history majors. Students develop, edit, and revise texts spanning professional practices in art history.

## HOA 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## HOA 500 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOA 510 - Italian Medieval Architecture and Urbanism <br> College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: ARC 537
Investigates sites, buildings, and rituals of local identity in a range of centers including monasteries, castles, hilltowns, ports, republics, and tyrannies, between 300 and 1400. Trips to Umbria and Sicily. Offered only in Florence. PREREQ: HOA 105 OR ARC 134 OR CAS 134

## HOA 520 - Italian Urbanism: 100 Cities

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARC 536
A survey of Italian urban history: design of cities, local rituals, politics, and patronage in ancient Rome, medieval Venice, Renaissance Florence, Baroque Turin, and modern Milan. Site visits in Florence and surrounding towns. Offered only in Florence.
PREREQ: ANY HOA 100-499

## HOA 522 - Botticelli: Analysis in Depth

College of Arts and Sciences
3 credit(s) Irregularly
Botticelli within the socio-artistic context of 15thcentury Florence. Portraiture, classical myths, civic propaganda, gender, and religious narrative. Offered only in Florence.
PREREQ: HOA 105

## HOA 530 - History of Printmaking

College of Arts and Sciences
3-4 credit(s) Irregularly
Fifteenth-century to present day woodcuts, engravings, etchings, aquatints, lithographs, and monotypes. Dürer, Rembrandt, Goya, Blake, Daumier, Whistler, and others. PREREQ: HOA 105 OR HOA 106

## HOA 531 - Paper Arts in the Low Countries

## College of Arts and Sciences

3 credit(s) Irregularly
This course examines the production of drawings
and prints, mainly in Flanders (modern-day
Belgium) and the Netherlands during what is
known as the early modern period: 1400-1700.

## HOA 540-17th Century Dutch Painting

## College of Arts and Sciences

3-4 credit(s) Irregularly
Principal Dutch masters (Rembrandt, Hals, Vermeer, Ruisdael, etc.). Developments in landscape, genre, still life, portraiture, and history painting.
PREREQ: HOA 105 AND HOA 106

## HOA 541 - Arts and Ideas in the 17th Century

## College of Arts and Sciences

3-4 credit(s) Irregularly
A consideration of music, literature, and the visual arts in the context of 17 th-century life. A study of the interrelationship of the main forces in society and their expression in the arts.
PREREQ: (HOA 105 AND HOA 106) OR (HOM 165 AND HOM 166)

## HOA 556 - Problems in Art History

College of Arts and Sciences
3-4 credit(s) At least $1 x$ fall or spring
Selected period, major figure(s) or monument(s)
in painting, sculpture, or architecture.
PREREQ: HOA 105 AND HOA 106
Repeatable 3 time(s), 16 credits maximum

## HOA 560 - Arts and Ideas in the Nineteenth Century

## College of Arts and Sciences

3-4 credit(s) Irregularly
Music and the visual arts in 19th-century European culture.
PREREQ: (HOA 105 AND HOA 106) OR (HOM
165 AND HOM 166)
HOA 571 - Italian Architecture, 19091959

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: ARC 539
Italian architecture from the birth of Futurism to the end of the post-WWII reconstruction. Representative structures in Milan, Rome, Como, and Florence. Includes overnight trip to Rome. Offered only in Florence.
PREREQ: HOA 106 OR ARC 134 OR CAS 134

## HOA 575 - Arts and Ideas in Contemporary Culture

## College of Arts and Sciences

3-4 credit(s) Irregularly
Place of music and the visual arts in the context of contemporary life. Inter-relationship between the main forces of society and their expression in the arts.
PREREQ: HOA 106 OR HOM 166

## HOA 576 - Topics in American Art

## College of Arts and Sciences

3-4 credit(s) Odd academic yr e.g. 2007-8
Critical exploration of an important American movement, theme, period, or artist. Emphasizing discussion and recent scholarship. Topic announced each semester.
PREREQ: HOA 106 OR 276 OR ANY HOA 300 LEVEL

## HOA 577 - Introduction to Preservation

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: ARC 566
Problems and methods in implementing continued use for quality segments of the humanly built environment.
PREREQ: ARC 134 OR CAS 134

## History of Music

## HOM 100 - Selected Topic

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOM 125 - Introductory Music Theory

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: MTC 125
Elementary harmony, form and counterpoint through writing and listening. For non-majors and music theatre majors only.

## HOM 165 - Understanding Music I

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Introduction to the art of music. Development of musical styles in the West from ancient Greece through the Middle Ages and Renaissance.
Assumes no prior musical knowledge.

## HOM 166 - Understanding Music II

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Introduction to the art of music. Musical styles
from early baroque to the 20th century, stressing the characteristic interests and achievements of each historical epoch. Assumes no prior musical knowledge.

## HOM 167 - Introduction to Music History

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: MHL 167
Introduction to music history, focusing on the European and American concert repertoire.

## HOM 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HOM 195 - Performance Live

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
The art and meaning of music/dance performance through dialogue with performers in the classroom and experience of performances in local settings, emphasizing both western and non-western traditions. No musical experience necessary.

## HOM 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOM 202 - Arts of Italy

College of Arts and Sciences
3 credit(s)
Crosslisted with: HOA 202
Selected aspects, drawing on appropriate resources in architecture, museums, and/or musical performance in immediate geographical area. Offered only in Florence. Specific topics determined each semester.

## HOM 206 - Arts of France

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HOA 206
Selected aspects, drawing on appropriate resources in architecture, museums, and/or musical performance in immediate geographical area. Offered only in Strasbourg. Specific topics
determined each semester.

## HOM 207 - Arts of England

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HOA 207
Selected aspects, drawing on appropriate resources in architecture, museums, and/or musical performance in immediate geographical area. Offered only in London. Specific topics determined each semester.

## HOM 209 - Arts of Spain

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HOA 209
Introduction to the art, architecture, music, and dance of Spain. Museum, gallery, and site visits. Concert, dance, and other performances. Topics vary. Offered only in Madrid.

## HOM 267 - European Music from 1750-1914

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: MHL 267
European music from 1750 to 1914 in its cultural and philosophical contexts. Extensive listening. Analytical focus on selected composers and works. Presupposes familiarity with musical notation, terms and concepts.

## HOM 268 - European and American Music Since 1914

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: MHL 268
Major trends and figures in art music in the United States and Europe since 1914. Topics include nationalism, neoclassicism, serialism, indeterminacy, and minimalism. Assumes basic knowledge of music.
PREREQ: ANY HOM 100-699 LEVEL OR ANY MHL 100-699 LEVEL

## HOM 280 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HOM 285 - Introduction to World Music

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: MHL 185
Introduction to world music in its social, political, and cultural contexts, with an emphasis on building listening and analytic skills. Intended primarily for music and music history and culture majors.

## HOM 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## HOM 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOM 313 - Film Music

College of Arts and Sciences
3 credit(s) Irregularly
Survey of film music, from the era of silent film to the present day.

## HOM 325 - Music in Latin America

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Music of Latin America in its cultural, historical, and political contexts. The course uses instruments, rhythms, and movements as starting points to explore issues of migration, urbanization, nationalism, race and ethnicity in Latin America.

## HOM 326 - Music in the Caribbean

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8 Music of the Caribbean region in its cultural, historical, and political contexts. The course uses instruments, rhythms, and movements as starting points to explore issues of migration, urbanization, nationalism, race and ethnicity in the Caribbean.

## HOM 353 - Worlds of Dance

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
A cross-cultural exploration of dance cultures of the world. The structure, organization, meaning, and expressive power of dance and its connection to belief systems, politics, social organization, and
aesthetic ideas.

## HOM 361 - Topics in European Music

## College of Arts and Sciences

3 credit(s) Irregularly
Selected works, genres, movements or topics in the history of European music. Development of musical style, analysis of social and political relationships. Specific areas of study announced each semester.
Repeatable 1 time(s), 6 credits maximum

## HOM 362 - Symphonic Music

## College of Arts and Sciences

3 credit(s) Irregularly
History of symphonic music from the 18th century to the present. Development of musical style in its social and intellectual contexts. Musical expression and meaning. Sometimes offered abroad.

## HOM 363-Opera in Society

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Opera as an art form and as a mirror of social attitudes from its inception to the present. Relationships between music and the stage in various historical settings. Sometimes offered abroad.

## HOM 364 - The London Classical Musical Scene

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Varieties of classical music. Styles of performance and social traditions of music unique to and currently represented in London's musical life. Includes some required attendance at musical events. Offered only in London.

## HOM 371 - Topics in American Music

## College of Arts and Sciences

3 credit(s) Irregularly
Studies of the social, cultural, and musical forces at work in both serious and popular music in America. Specific areas of study announced each semester.
Repeatable 1 time(s), 6 credits maximum

## HOM 372 - Music in Multicultural America

## College of Arts and Sciences

3 credit(s) Irregularly
Issues, concepts, and processes that have shaped ethnic musical subcultures in the U.S., with case studies such as the pow-wow, gospel blues, conjunto, klezmer, and South Asian bhangra musics.

## HOM 373 - History of Musical Theater

## College of Arts and Sciences

3 credit(s) Irregularly
Musical theater within a larger cultural context.
European roots of musical theater before turning to an analysis of Anglo-American musical theater in the 20th and 21st centuries.

## HOM 375 - American Music

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Celebrates the rich history of music in the United States from the earliest times to the present. Cultivated, vernacular, and folk traditions as reflections of the American musical landscape.

## HOM 377 - History of Jazz

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
The roots, development, and diffusion of jazz music.
PREREQ: ANY HOM OR MHL COURSE 100-499

## HOM 378 - Rock Music

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
The roots, development, and diffusion of rock music.
PREREQ: ANY HOM 100-499 LEVEL OR MHL 100MHL 499 LEVEL

## HOM 380 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable 90 time(s)

## HOM 381 - Topics in Ethnomusicology

## College of Arts and Sciences

3 credit(s) Irregularly
Selected topics in the study of the performing arts in their cultural and social contexts, focusing on, e.g., geographic areas, genres, instruments, or cross-cultural topics.
Repeatable 1 time(s), 6 credits maximum

## HOM 384 - Music and Dance of India

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: SAS 385
Selected music and dance traditions of India in their cultural, historical, and performative contexts, representing classical, devotional, folk, tribal, and
popular arts. Performance as a window into Indian culture, society, and modernization.

## HOM 385 - Structure and Meaning in World Music

## College of Arts and Sciences

3 credit(s) Irregularly
Advanced topics in world music focusing on music cultures of Asia, Africa, and the Americas. Sound structure, style, transmission, cultural context, and meaning.
PREREQ: HOM 195 OR HOM 285 OR MHL 185

## HOM 386 - Sounds of the Silk Road

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: MES 386, SAS 386
The soundscapes of the overland Silk Road as a window into history, commerce, migration, social life, values, faith, tolerance and conflict. Case studies from Turkish, Arabic, Persian, Central Asia, and Southwest Asia musics.

## HOM 396 - Junior Seminar: Musicology in Action

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Students engage with music institutions and music communities in Central New York and beyond. Development of music research and writing skills.

## HOM 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOM 415 - History of Recorded Sound

## College of Arts and Sciences

3 credit(s) Irregularly
The history of sound recording technology from its origins to the present day.

## HOM 419 - Music and Media

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
A critical studyof contemporary music and media
in a variety of contexts, including radio, recordings, television, film and cyberspace.

## HOM 453 - Dance in American Culture

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Varieties of dance in the United States today; issues of racial, regional, gender, national and other identities in the practice of American dance.

## HOM 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Irregularly
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable 90 time(s)

## HOM 473 - Women, Rap and Hip-Hop

 Feminism
## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: WGS 473
Links between feminism, rap music and hip-hop culture. We explore the work of actual women in hip-hop, images of women, and feminist critiques of the music and the culture. Additional work required of graduate students.

## HOM 480 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HOM 482 - The Roots of Global Pop

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 The development of world popular music throughout the 20th century in the contexts of colonization, modernization, resistance, nationalism, and globalization. The sounds and production values of global fusions and issues of authenticity, identity, and appropriation. PREREQ: ANY HOM 100-699 LEVEL OR ANY MHL 100-699 LEVEL

## HOM 485 - Contemporary Indigenous

 Soundscapes
## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: HOM 685
An interdisciplinary course about music and dance cultures of the world's indigenous peoples in the context of contemporary social, cultural, and political issues: religion, identity, representation, globalization, tourism, political movements. Additional work required of graduate students.

## HOM 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## HOM 492 - Music and the Sacred

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: REL 392
Intersection of music and the sacred in a variety of cultural traditions and historical periods.

## HOM 493 - Music and Identity

## College of Arts and Sciences

3 credit(s) Irregularly
A critical study of the intersections of music and various types of identites in the world today, such as individual, ethnic, gender, religious, national, and commercial.

## HOM 494 - Music and Gender

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Crosslisted with: WGS 494
The impact of gender ideology and behavior on the performing arts and the role of performance in maintaining and subverting gender identities and relations.

## HOM 496 - Distinction Project in Music History and Cultures

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Supervised independent research culminating in a large-scale project demonstrating fluency with musical research and writing to fulfill partial requirements for Distinction in the Music and History Cultures Program. Candidates for distinction in the Music History and Cultures major only.

## HOM 497 - Music and Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Western art music, popular music, and world music as political/ cultural forces. Music as a political discourse. Music and meaning.

## HOM 498 - Intersections in Popular and Classical Music

## College of Arts and Sciences

3 credit(s) Irregularly
An in-depth look into the intersections of popular and classical musics of the twentieth and
twenty-first centuries. Particular attention is paid to moments that exhibit tensions and slippage between the two categories.

## HOM 499 - Honors Capstone Project <br> College of Arts and Sciences <br> 1-6 credit(s) Upon sufficient interest <br> Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable

## HOM 500-Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HOM 512 - World Music and Film

College of Arts and Sciences
3 credit(s) Irregularly
The global flows of music explored through commercial, ethnographic, documentary, and animated films. How music and musicians outside the Euro-American mainstream have been represented, creatively adopted and recontextualized, and used to construct meaning. PREREQ: ANY HOM 100-699 LEVEL OR ANY MHL 100-699 LEVEL

## HOM 561 - Music and Shakespeare

## College of Arts and Sciences

3-4 credit(s) Irregularly
Crosslisted with: DRA 561
A discussion-based course investigating the place of music in Shakespeare's plays. Also considers the role of music in early modern English culture as well as later musical adaptations of Shakespeare.

## HOM 562 - Bach and Handel

## College of Arts and Sciences

3 credit(s) Irregularly
Explores the careers and compositional output of Bach and Handel. Considers issues of genre, style, theology and religion, nationhood, and patronage. PREREQ: ANY HOM 100-699 LEVEL OR ANY MHL 100-699 LEVEL

## HOM 563 - The Operas of Wagner

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
The historical analysis, interpretation, and reception history of Wagner's musical and dramatic work.
PREREQ: HOM 165 OR HOM 166 OR HOM 266
OR HOM 267/MHL 267 OR MHL 168

## HOM 568 - Music of Beethoven

College of Arts and Sciences
3 credit(s) Irregularly
Life and works of Beethoven in their social context. Beethoven as cultural symbol and in the development of style. Intensive focus on specific works.
PREREQ: MTC 146
Repeatable 1 time(s), 6 credits maximum

## HOM 571 - Popular Music Studies

College of Arts and Sciences
3 credit(s) Irregularly
A research seminar in the study of popular music with emphasis on methodologies from a variety of disciplines ranging from musicology and music theory to sociology and cultural studies. PREREQ: ANY HOM 100-699 LEVEL OR ANY MHL 100-699 LEVEL

## HOM 573 - History of American Song

College of Arts and Sciences
3 credit(s) Irregularly
The American art song, emphasizing the 20th-
century composers. Musical style of works, placed in their social and cultural contexts.
PREREQ: MTC 146

## HOM 592 - Music, Space and Place

College of Arts and Sciences
3 credit(s) Irregularly
An exploration of the relationships between music, space and place, considered from a variety of musical practices and scholarly methodologies.

## History

## HST 100 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HST 101 - American History to 1865

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Founding and development of institutions. The Revolution and the new nation. Problems of growth and sectionalism. Challenge to the union.

## HST 102 - American History Since 1865

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Reconstruction. Industrialization and its effects. Emergence as a world power. Economic and social problems, reforms. Global war and global
responsibilities.

## HST 111 - Early Modern Europe, 13501815

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Major characteristics of European political, social, and cultural life from Middle Ages to advent of democratic revolutions.

## HST 112 - Modern Europe: Napoleon to the Present

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring European lives and experiences in the age of industrialization, urbanization, and mass politics. World wars, fascism, the Russian Revolution, empires, Europe in the post-World War II era.

## HST 121 - Global History to 1750

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The development of global society up to 1750 .
Exchanges, connections and interactions between
Africa, Asia and the Pacific, India, Latin America and the Caribbean, and the Middle East. The relations between these regions, the Americas and Europe.

## HST 122 - Global History 1750 to Present

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The development of global society since 1750. Exchanges, connections and interactions between Africa, Asia and the Pacific, India, Latin America and the Caribbean, and the Middle East. The relations between these regions, the Americas and Europe.

## HST 145 - Introduction to Historical Archaeology

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: ANT 145
Role of history and archaeology in our understanding of 17 th- to 19 th-century Europe, Africa, and America. Historical archaeology as a mechanism to critique perceptions of the past. Firsthand record of ethnic groups and cultural settings not recorded in writing.

## HST 180 - International Course

## College of Arts and Sciences

## 1-6 credit(s)

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level,
title, and grade for the student's transcript. Repeatable

## HST 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HST 201 - Research Seminar in History

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to the excitement and techniques of original research. Each seminar begins with introductory readings in a particular area of history; each student researches a question in original sources and presents the results in one or more essays.

## HST 210 - The Ancient World

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring The Ancient Mediterranean emphasizing major political, cultural, religious, and social developments. The Near East, Classical Greece, Hellenistic Civilization, Roman Republic, Roman Empire up to the fourth century A.D. May not be repeated for credit.

## HST 211 - Medieval and Renaissance Europe

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Survey of developments from the end of the Roman Empire to the beginnings of the Age of Discovery. Considers political and economic developments, as well as society, culture, and religion.

## HST 222 - History of American Sexuality

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Examines sexuality in America from the colonial period to the present, exploring how American views of sex and desire have changed over time.

## HST 231 - English History

College of Arts and Sciences
3 credit(s) Irregularly
Britain from the Roman occupation through the Revolution of 1688.

## HST 232 - English History

## College of Arts and Sciences

3 credit(s) Irregularly
Continuation of HST 231 from 1688.

## HST 270 - Experience Credit

College of Arts and Sciences
1-6 credit(s) At least 1 x fall or spring Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## HST 280 - International Course

## College of Arts and Sciences

1-12 credit(s) At least $1 x$ fall or spring Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HST 290 - Independent Study

College of Arts and Sciences
1-6 credit(s) At least $1 x$ fall or spring Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## HST 295 - The Development of Air Power: First 50 Years

College of Arts and Sciences
$0-1$ credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 295
Factors contributing to change in the nature of military conflict, the development of air power from its earliest beginnings, and the way air-power doctrine has evolved.

## HST 296 - The Development of Air Power: 1947 to the Present

## College of Arts and Sciences

$0-1$ credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 296
The development of air power from the end of World War II to the present. How air power is used in support of both military and nonmilitary national objectives.

## HST 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HST 302 - Early American History

## College of Arts and Sciences

3 credit(s) Irregularly
European invasion of America. Native American resistance. Institutions of conquest, colonization, and empire. Anglicization of the colonists and the acculturation of the Iroquois. Servitude, slavery, and the family.

## HST 303 - The Age of the American Revolution

## College of Arts and Sciences

3 credit(s) Irregularly
Provincial America, its peoples, and their societies. Imperial war and administration. Anglo-American politics and dissent. The war of national liberation. Confederation; formation of the Constitution.

## HST 304 - Age of Jefferson and Jackson

## College of Arts and Sciences

3 credit(s) Irregularly
Development of political parties and institutions from 1789 to 1850 . Impact of major figures, such as Jefferson and Jackson. Social and economic factors.

## HST 305 - America in Crisis: The Civil War and Reconstruction

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Coming of the Civil War, leading figures in the crises, and problems of reconstructing the divided nation.

## HST 306 - The Long Civil Rights Era

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Explores the development of social and political protest for civil rights from World War I through the 1970's.

## HST 307 - The United States in the Modern Age, 1917-1963

## College of Arts and Sciences

3 credit(s) Irregularly
World War I. Social/political development in the twenties. Impact of the Depression. Roosevelt and the New Deal. World War II. Cold War, McCarthyism, private culture of the fifties, emergence of the Civil Rights movement.

## HST 308 - Recent History of the United States, 1963-Present

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The Great Society. Domestic ferment in the sixties. Vietnam. Watergate. Economic defeats of the seventies and eighties. Ronald Reagan's America. The politics of the nineties and the shaping of new
prosperity.

## HST 310 - The Early Middle Ages

College of Arts and Sciences
3 credit(s) Irregularly
History of Western Europe from c. 300 to c. 850. Political, religious, cultural, social, and economic developments. Special emphasis on reading and analyzing primary sources.

## HST 311 - Medieval Civilization

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Political, economic, religious, cultural history of Europe 800-1200, including the fall and rise of royal authority, disagreements over the roles of church and king, economic change, developing ideas and technologies, the rise of cities.

## HST 312 - Reformation of the 16th Century

## College of Arts and Sciences

3 credit(s) Irregularly
Protestant and Catholic Reformations. French Civil Wars, social foundations of modern religious denominations, and historical psychology of religious conversion experiences.

HST 313 - French Revolution: Sun King to Guillotine
College of Arts and Sciences
3 credit(s) At least 1 x fall or spring How the Europe of Bach, Mozart, Voltaire, and Frederick the Great became the Europe of Beethoven, Goethe, the French Revolution, and Napoleon.

HST 314 - Europe from Bismarck to the First World War
College of Arts and Sciences
3 credit(s) Irregularly
Domestic development and foreign relations of major European states. Industrialization, urbanization, emergence of mass political parties, socialism and class conflict, social reform, growth of nationalist loyalties, imperialism, causes of World War I.

## HST 315 - Europe in the Age of Hitler and Stalin

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring World War I as the great divide. Why fascism, crisis for democracies, Soviet dictatorship and its impact on Europeans, and World War II emerged one generation later.

## HST 316 - Europe Since 1945

## College of Arts and Sciences

3 credit(s) Irregularly
History of Europe from the fall of the Nazi-led 'New Order' to the present. Cold War in East/ West Europe, economic growth/social change, decolonization, welfare state, fall of Communism, European Union, and contemporary Europe.

## HST 318 - The Middle East to 1900

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 318
Beginning with the rise and spread of Islam through the reform era of the nineteenth-century, this course focuses on the social and cultural history of the Ottoman Empire.

HST 319 - The Middle East in the 20th Century

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: MES 319
Social and cultural history of the Middle East in the twentieth-century, including themes such as colonialism, anti-colonial nationalism, modernity, social movements, women and gender, and contemporary issues.

## HST 320 - Traditional China

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Political, economic, social and cultural history before 1650. Emphasis on sources of change and stability. Main themes: Confucianism, Buddhism, and Daoism; invasion and rebellion: conquest and consolidation. May not be repeated for credit.

## HST 321 - Modern China

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Political, economic, social and cultural history since 1650. Main themes: Social change in city and countryside, impact of Western nations, enduring legacies of traditional China.

## HST 322 - Colonial Latin America

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: LAS 322, SPA 325
Development of Amer-Indian civilization and the Spanish conquests. Evolution of the Spanish American economy and the unique American culture. Growth of the plantation economy of Brazil. The movements toward independence.

HST 323 - Modern Latin America<br>College of Arts and Sciences<br>3 credit(s) At least $1 x$ fall or spring

Crosslisted with: LAS 313
The turmoil of the postindependence period and the search for economic and political stability. Reasons for and consequences of export-led growth. The role of the United States in preserving the status quo in the Americas.

## HST 324 - Recent Latin American History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LAS 324
Developments since World War I. Political, economic, and social change and growth of nationalism.

## HST 325 - Africa to 1800

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: AAS 325
The first half of a two semester survey focusing on the evolution of African cultures and civilization in the traditional period. Topics: the emergence of man, migration of peoples, economic and social systems, state formation, the slave trade. Arabic influences and the early European settlement in South Africa.

## HST 326 - Africa Since 1800

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: AAS 326
Second half of the survey, studying Africa when it was affected by European peoples and cultures. Topics: penetration by European explorers and missionaries, imperialism and colonialism,
African resistance and rebellion, nationalism and liberation, neocolonialism and other problems of independence.

## HST 327 - A History of Southern Africa

## College of Arts and Sciences

3 credit(s) Irregularly
Begins before arrival of Europeans in southern Africa. Economic, geographic, sociological, and political factors contributing to development of this unique, racially based modern state. Includes Afrikaaner diaspora, Euro-African conflict during the nineteenth century, Anglo-Boer War, from union to apartheid, and resistance to European domination.

## HST 328 - Ancient and Medieval India

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: SAS 328
Formation of traditional Indian kinship, religion, philosophy, and culture. Vedic society and the rise of Buddhism. Medieval Hindu kingdoms. Expansion and the legacy of Islam. Rise and
disintegration of the Mughal empire.

## HST 329 - Making of Modern India

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: SAS 329
British colonial expansion in India. Emergence of nationalism and related movements of religious, social, and cultural reform. Gandhi and nonviolence. Struggle for independence and the politics of gender, class, caste, and religious community.

## HST 330 - The Iroquois

College of Arts and Sciences
3 credit(s) Irregularly
The People of the Longhouse, the Five (afterwards Six) Nations, their archaeology, tradition, and history, from 1100 to 1815 . May not be repeated for credit.

## HST 332 - African American History: Through the 19th Century

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: AAS 332
Cultural, economic, political, and social developments shaping experiences of North Americans of African descent. Foundations of collective identity and diversity. African American historiography. Interpretive and methodological issues in historical practice.

## HST 333 - African American History: After the 19th Century

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 333
Continuation of AAS/HST 332.

## HST 334 - Social and Cultural History of the United States

## College of Arts and Sciences

3 credit(s) Irregularly
Social and cultural developments, 1607-1861.
American population growth, rural and urban life, religion, education and learning, literature and the arts.

## HST 335 - American Social and Cultural History

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: WGS 335
Nature of "American character" through the last century. Aspects of intellectual life, social mores, industry, and art that represent Americans' definitions of themselves and their nation.

## HST 336 - United States in World Politics to 1914 <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> American diplomacy to 1914.

HST 337 - America in the World: The History of U.S. Foreign Relations, 1898- Present

College of Arts and Sciences
3 credit(s) Irregularly
This course examines the history of U.S. foreign relations from 1898 to the present. It focuses on the political, economic, ideological, and cultural influences on U.S. foreign policy and the implications of American power broadly defined.

## HST 338 - History of the Southern

United States to 1865
College of Arts and Sciences
3 credit(s) Irregularly Development of Old South society, economy, culture, and politics through readings, lectures, and discussions. First part of two-course survey of Southern United States.

## HST 339 - History of the Southern United States Since 1865

College of Arts and Sciences
3 credit(s) Irregularly Development of southern society, economy, culture, and politics after the Civil War. Readings, lectures, and discussions. Second part of a twocourse survey of the Southern United States.

## HST 340 - Women in America: 17th Century to the Civil War <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring Crosslisted with: WGS 342 <br> Focus on significant social and political transformation, activism, and individuals

## HST 341 - The Modern American Presidency

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: PSC 329
Evolution, operation, and perceptions of the American presidency during the last quartercentury. Modern chief executives and factors contributing to their success or failure.

[^7]of Darwinian science to the present. Basic thought patterns of 20th-century public life and philosophical foundations of contemporary political movements.

## HST 343 - History of New York State

## College of Arts and Sciences

3 credit(s) Irregularly
New York's development since 1850, with special attention to the industrial order on its society, government, politics, and social thinking. Primarily for prospective teachers.

## HST 345 - Workers and Organized Labor in U.S. History, 1840 to Present

## College of Arts and Sciences

3 credit(s) Irregularly
The history of American workers and their efforts at protesting the transformation of the U.S. economy. The Knights of Labor, the A.F.L., the I.W.W., and the C.I.O. Forms of dissent: culture, violence, and radicalism law.

## HST 347 - Modern American Politics Through Fiction

## College of Arts and Sciences

3 credit(s) Irregularly
The political culture of modern America through the medium of popular fiction. Writing intensive and discussion based class, with enrollment limited to 20 Honors students.

## HST 348 - Queering the Middle Ages?

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Crosslisted with: QSX 348
This course introduces students to the models and methods developed in the field of queer theory and applies them to a wide range of medieval texts (letters, novels, monastic rules, medieval historiography, legal texts etc.).

## HST 349 - Women in America: Civil War to Present

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: WGS 349
Focus on significant social and political
transformation, activism, and individuals.

## HST 352 - History of Ancient Greece

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Ancient Greek political, economic, social, and cultural history based on interpretation of primary sources, both literary and archaeological, from the Bronze Age through Alexander the Great.

## HST 353 - History of Ancient Rome

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Ancient Roman political, economic, social, and cultural history based on interpretation of primary sources, both literary and archaeological, from the foundation of the city to the dissolution of the Empire in the west.

## HST 354 - Decline and Fall of the Roman Empire

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The late Roman Empire and the Mediterranean world from c. 200 to c. 700 . Political, religious, cultural, social history. Rise of Christianity, transformation of classical culture, and the socalled Decline and Fall of Rome.

## HST 355 - The Italian Renaissance

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Renaissance in Italy, between 1330 and 1500.
Political, economic, and intellectual developments.
Also offered regularly abroad.

## HST 356 - Italy Since 1600

## College of Arts and Sciences

3 credit(s) Irregularly
History of Italy from the end of the Renaissance to the present. Struggle for unification, rise of fascism, and transformations of postwar Italy.

HST 357 - Culture and politics in Early Modern England: Henry VIII to Charles I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Renaissance and Reformation in 16th-17th century England. Transformation of politics, culture, and society from Henry VIII through the reign of Charles I, 1485-1649.

HST 358 - Revolution and Civil War in 17th Century England
College of Arts and Sciences
3 credit(s) Irregularly
Emergence of modern England, 1603-
1714. Triumph of parliamentary institutions, development of capitalism, and beginning of the empire. Intellectual and cultural change: transition from religious controversy to the age of reason.

## HST 359 - Modern Britain 1850 to the Present

## College of Arts and Sciences

3 credit(s) Irregularly
Political, cultural, and intellectual history of Britain from 1850. Considers the idea of Britishness as
national identity, cultural construct, or imperial discourse. Questions the meaning of modernity as a model for change.

## HST 360 - Modern France from Napoleon <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Political turbulence as the legacy of revolution and empire. Lushness and crisis. Peasants, workers, city people, army officers, psychiatrists, and priests. France in the age of total war.

## HST 361 - Germany to World War I, 1770-1918

## College of Arts and Sciences

3-4 credit(s) Irregularly
Causes and consequences of the first unification of Germany: Authoritarian and military characteristics of Prussia. Its response to modern challenges. Bismarck's unification of Germany under Prussia. Strengths and weaknesses of the new German Empire. Overthrow in 1918.

## HST 362 - Nazi Germany and the Holocaust

## College of Arts and Sciences

3-4 credit(s) At least 1x fall or spring Crosslisted with: JSP 362, QSX 362
Rise of Nazism, fall of the Weimar Republic, fascist ideology, everyday life under Nazism for "Aryans," Jews, disabled people, Roma, gay people, AfroGermans, others. Planning for genocide, the Holocaust, reactions and memories after 1945.

## HST 363 - Germany Since 1945

College of Arts and Sciences
3-4 credit(s) Irregularly
Aftermath of World War II. Development of a corporatist form of capitalist democracy in West Germany and a communist state in East Germany, 1945-1989. Burdens from the Nazi past. Unification in 1990. The current scene.

## HST 364 - The Origins of Modern Russia

## College of Arts and Sciences

3-4 credit(s) Irregularly
Russian history from Muscovy to the Revolution of 1905, with an emphasis on political institutions, the stratification of society, and the growth of the intelligentsia.

## HST 365 - Russia in the Twentieth Century

## College of Arts and Sciences

3-4 credit(s) Irregularly
A survey of Russian history from the Revolution
of 1905 to the present, including WW I and
revolutions of 1917, Leninism, Stalinism and the collapse of the USSR.

## HST 367 - Plague to AIDS

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Examines the social, institutional, political, and cultural dimensions of disease, healthcare and medicine in Europe from the early modern period to the present day.

## HST 368 - Islam and the West

## College of Arts and Sciences

3 credit(s)
Crosslisted with: MES 368, PSC 368
Topics include globalization and interdependency of faiths, the "clash of civilizations", relations between religion and state in Islam and Christianity and whether it is possible to separate the world into monolithic entities "Islam" and "West". Offered in London only.

## HST 369 - The World at War: 19141918, 1939-1945

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Major developments in military history of World War I and World War II. Film as one tool for understanding nature and scope of conflicts that changed the world.

## HST 371 - Gender in Latin American History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LAS 371, WGS 371
History of women and gender relations from colonial period to the present. Influence of race, class, and ethnicity on gender. Relation of gender to labor, family, sexuality, and politics.

## HST 372 - Race in Latin America

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LAS 372, NAT 372
Race relations in Latin America from the late colonial era to present. Indigenous, immigrant, and Afro-Latin American experiences and how they have changed over time. Relations of race to national identity.

## HST 373 - The Crusades

## College of Arts and Sciences

3 credit(s) Irregularly
This course examines the historical phenomenon of crusade, with particular emphasis on the first four crusades to the Holy Land and on crusades within Europe.

HST 375 - British Empire<br>College of Arts and Sciences<br>3 credit(s) Irregularly<br>Crosslisted with: SAS 375<br>Seminar on expansion of the British Empire (emphasis on India and Africa) in the 18th and 19th centuries. Explores histories of conquest, administration and imperial policy, and the ideologies of imperialism and colonialism.

## HST 376 - Renaissance London (Honors)

## College of Arts and Sciences

## 4 credit(s)

History and development of London in the 16th and 17th centuries. Topics include the visual arts; cultural, economic, and social change; literature and the theater; crime; architecture; and royal politics and government.

## HST 377 - History of Venice

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring History of the city of Venice from its origins to the present. Considers Venice as an independent republic and imperial power and its significance in the Western imagination.

## HST 378 - Early Modern Mediterranean

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Focus on Ottomans, Italy, France, Iberia, North Africa, 1348-1789. Topics include international relations and empire-building in Africa, Asia, and Europe; commerce, piracy, plague, religion, family/sexuality, architecture, political and cultural developments during Renaissance, Age of Discovery Enlightenment.

## HST 379 - Gender, Race, and Colonialism

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 379
Explores the intersection of gender and race in colonial ideologies, imperial practices and anticolonial nationalist movements, in the 18th and 19th centuries.

## HST 380 - International Course

## College of Arts and Sciences

1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

HST 383 - Foundations of American Political Thought<br>College of Arts and Sciences<br>3 credit(s) Irregularly<br>Crosslisted with: PSC 326<br>American political thought from the Puritans to Lincoln. American Revolution, establishment of the Constitution, and Jeffersonian and Hamiltonian systems.

## HST 384 - American Environmental History and Geography <br> College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: GEO 354
Relationship between Americans and the natural environment from the colonial period to the present. Ecological imperialism, technology and nature, resource-management conflicts, urban environments, development of conservation and environmentalism.

## HST 385 - United States Legal History, 1620 to Present

## College of Arts and Sciences

3 credit(s) Irregularly
The role of law in American history from the colonial period to the present. The common law, the Constitution, the market revolution, slavery and emancipation, laissez-faire, legal realism, the New Deal, and civil rights.

HST 386 - Crime and Society in American History, 1620 to Present

College of Arts and Sciences
3 credit(s) Irregularly
The history of American deviance and dissent from colonial Massachusetts to the present. Social transformation and the rise of urban crime. The changing role of the state. Police, radicalism, alcohol, vice, sexuality, and organized crime.

## HST 387 - Women, Abolition, and <br> Religion in 19th Century America

College of Arts and Sciences
3 credit(s)
Crosslisted with: REL 341,WGS 341
The role that religion may have played in women's understandings of themselves as abolitionists and social reformers. A selected group of women will be studied, with considerable attention given to Frances Harper.

## HST 388 - Vietnam: Movies, Memoirs and the Shaping of Public Memory

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
An exploration of Vietnam in public memory through film and personal memoirs.

## HST 389 - LGBT History

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: QSX 389, WGS 389
The history of lesbian, gay, bisexual, transgender experience in period and region (North America, Europe, or Global) of instructor's expertise, with attention to the international context..

## HST 390 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## HST 391 - Mary Magdalene: History of a Legend

## College of Arts and Sciences

3 credit(s) Irregularly
Examines legends surrounding Mary Magdalene, from New Testament to Da Vinci Code. Uses diverse primary sources and scholarship; traces the legend's evolution and examines its changing significance.

## HST 392 - History of the Holocaust

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: JSP 392
Study of the events and issues of historical interpretation in the Holocaust, 1933-1945. Attitudes and behavior of Nazi perpetrators, Jewish victims, and bystanders.

## HST 393 - East Asia and the Socialist Experience

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Examines the adoption of socialism in East Asia. Historical account of how socialist China, Mongolia, North Korea and Vietnam arose, developed, "failed" and responded to globalization in the 20th century.

## HST 394 - Partition of India in Film

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: SAS 394
Explores the partition of India in 1947 through South Asian films.

## HST 395 - Modern Japan

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Examines Japanese society from early-modern
times (1600-1868) through modern (1868-
1945) and postwar Japan (1945-today). Topics include: urbanization, mass culture and nationalism, popular protest, imperialism and empire, gender, war and occupation and globalization.

## HST 396 - Women and the American Frontier

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: WGS 396
The North American frontier, from the 17th to the early 20th century, as it was experienced by women of various cultural and national origins.

## HST 397 - Modern Korea

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Examines political, economic and social history from 1860 until today. Topics include: colonialism, modernity, division, the Korean War, nationbuilding, nationalism, democratization, North Korean society, inter-Korean affairs, nuclear issues, Korean Diaspora and "Korea Wave."

## HST 398 - Saints and Sinners in the Middle Ages

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Investigates notions of sanctity and modes to impose morality and social discipline in the medieval period. Reading narrative texts (esp. saints lives and literary texts) as historical sources.

## HST 399 - Utopia and Institution: Early Monasticism

## College of Arts and Sciences

3 credit(s) Irregularly
Investigates the rise of monasticism in the West as a case study on institution forming and the attempts to organize perfect life in a community..

## HST 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) At least 1x fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HST 401 - Senior Seminar

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Research techniques in the use of source material and historical evidence. Preparation of original research paper. Satisfies research requirement for history majors and minors.
Repeatable 1 time(s), 6 credits maximum

## HST 402 - Slavery and Abolition

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 402
Evolution and diverse character of North American slavery and antislavery. Slavery as labor, legal, and property system, cultural and political phenomenon, and social and economic network. Politics and ethics of abolition.

## HST 403 - American History Through Documentary Film

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Compares the presentation of US history through documentary film and traditional written sources. Special attention is given to telling history as an act of public memory.

## HST 404 - Family and Gender in

 Renaissance ItalyCollege of Arts and Sciences
3 credit(s)
Crosslisted with: ANT 404, WGS 404
Historical and interdisciplinary exploration of life stages, rites of passage, marriage, family, social life, sodomy, prostitution, career options, and alternate life strategies as illustrated by case studies. Offered only in Florence.

## HST 405 - History of American Popular

 Culture
## College of Arts and Sciences

3 credit(s) Irregularly
Exploration of the history of American popular culture and the use of popular culture to study history.

## HST 406 - Contemporary Issues in Chile and Latin America

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: IRP 334, LAS 334, PSC 428, SPA 334
Offered only in Santiago. This seminar features in-situ lectures and activities in Chile, Argentina and Uruguay introducing important political, sociological and environmental issues in the Southern Cone region.

## HST 408 - The Practice of Eros:A History of Sexuality in Europe (14001800)

## College of Arts and Sciences

3 credit(s)
Crosslisted with: ANT 408,WGS 408
Authorized and "alternative" sexuality in Europe 15th to 18th centuries (especially Italy, France, and England.) "Licit love" (courtship, marriage,
conjugal relations) as opposed to "illicit unions" (adultery, rape, prostitution, bestiality, homosexuality, lesbianism). Offered only in Florence.

## HST 409 - A History of Witchcraft

## College of Arts and Sciences

3 credit(s)
Crosslisted with: ANT 409, REL 409, WGS 409
History of witchcraft from various perspectives: its intellectual roots, the causes and dynamics of the witch-hunt, and the beliefs and self-perceptions of those who were called "witches". Offered only in Florence.

## HST 410 - Science and Technology in the Modern World

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: STS 410
Interaction of science with technology from 1700 to the present. Technological artifacts and their scientific background. Development of new technology from scientific research and from oldfashioned dreaming and tinkering.

## HST 411 - Contemporary Central and Eastern Europe

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: PSC 421
Offered only in Strasbourg. This course is designed to help students grasp the overall nature of contemporary Eastern and Central Europe, with emphasis on the breakup of the Sovet Union, and challenges of democratization and of EU unification.

## HST 412 - Understanding 20th Century Spain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: PSC 422
Offered only in Madrid. Course begins with War of Cuba and ends with Spain's new role in EU, NATO and UN. Particular focus on the rapid changes within Spain during this period and how these were accomplished.

## HST 413 - China Encounters the West: Qing Dynasty to Early Republic <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring <br> Offered only in Beijing. This course surveys the political, social, and cultural history of Qing China, using the great city of Beijing, the Qing capital, as its backdrop.

## HST 414 - America: A Foreign Perspective

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Offered only in London. US role in foreign policy from a British and global communmity perspective and issues of US identity and place in the world. Events include Suez Crisis, Cuban Missile Crisis, Vietnam, 9/11, the War on Terror.

## HST 415 - Europe, Russia and the Eastern Borderlands

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Offered only in Strasbourg. The first part of course focuses on question of borders/territorial change, construction of nations, and emergence/collapse of empires. The second part examines general problems common to post-communist countries.

## HST 416 - Europe and Arc of Crises

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Offered only in Strasbourg. Topics covered include European and American perspectives on Middle East; cultural, social and economic issues, such as inter-religious dialogue, migration and drug trafficking; the status of Turkey; Afghanistan and state terrorism.

## HST 417 - History of Women in Spain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SPA 417, WGS 417
Offered in Madrid only. History of women in Spain from primitive communities to the present. Topics include medieval, Golden Age, Enlightenment, and Romanticism; liberalism and feminism; women under Franco; Marxism and feminism; feminist movement in Spain.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## HST 422 - Ethnic History of Britain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: ANT 402
Offered only in London. Examines the ways in which migration has shaped and reworked British national identity over the past two thousand years through the study of original historical sources, literature, film and music, and explores the contributions that migrants have made to modern British society.

[^8]Crosslisted with: IRP 424, LAS 424, PSC 424
Offered only in Santiago. The time period (1940-present) and its significance and contributions to the configuration of social, political and economic aspects of Chile today. Relies on primary sources, comparisons within the Southern Cone, and a focus on US role and influence during this period.

## HST 426 - African American Urban History

College of Arts and Sciences
3 credit(s) Every semester Crosslisted with: AAS 426
Double Numbered with: HST 626
This seminar will examine the complex and varied Black urban experiences in the 20th and 21st centuries from the 1890s to the present.

## HST 434 - Underground Railroad

College of Arts and Sciences
3 credit(s) Upon sufficient interest Crosslisted with: AAS 434, ANT 494
Double Numbered with: HST 634
Myth and history of the Underground in the context of African American freedom efforts. Emphasis on events, personalities, and sites in upstate New York. Student field research and exploration of archival and Internet resources. Additional work required of graduate students.

## HST 441 - Europe and International Security Issues

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: PSC 441
Offered only in Strasbourg. Historical evolution of the concept of international security within the framework of European security-related institutions and the place of Europe in the context of new security challenges.

## HST 443 - Culture, Confucianism and Chinese Modernity

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: ANT 403
Offered only in Beijing. Contemporary China from historical and cultural perspectives. Exploration of political and ideological conflicts between China and the West. Patterns of Chinese culture. Impact of Confucianism on Chinese society and its influence outside of China

## HST 444 - Culture, Business and Political Economics in East Asia <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring <br> Crosslisted with: INB 444, IRP 444, PSC 444 <br> Offered only in Hong Kong. Examines the historical

and contemporary forces that shape the cultural, social and economic institutions in East Asia and how these institutions affect one another.

## HST 445 - Contemporary British Politics and the Modern World

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: PSC 445
Offered only in London. British political system and the historical factors shaping it, as well as Britain's role in creating the modern world and its place in the world today.

## HST 447 - France from the Revolution to the Great War

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: FRE 447
Study of the rise of the French Republic, its revolutions, and its recurrent lapses into authoritarian rule, notably under Napoleon I and III. Conducted in French. Offered in Strasbourg only. [Effective spring 2009]
PREREQ: FRE 202

## HST 449 - France from the Treaty of Versailles to European Integration

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: FRE 449
Analysis of major events in recent French history, including the rise of the Popular Front, the Nazi Occupation, the end of colonial rule, and the process of European integration. conducted in French. Offered in Strasbourg only. [Effective spring 2009]
PREREQ: FRE 202

## HST 451 - Visual Culture Past and

 Present: Gender, Religion and Politics
## College of Arts and Sciences

3 credit(s)
Crosslisted with: CRS 451, REL 451, WGS 451
Offered only in Florence. Contemporary visual culture; its representation of gender, religion, and politics and the origins of that representation in a pictorial language first codified in Italy and Europe between circa 1450 and 1650.

## HST 452 - Italy: Past, Present and Future Challenges

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: PSC 452
Offered only in Florence. Italian society and politics from unification to present. Topics include role of the family, emigration and immigration, stereotypes and regional identities, processes and components of Italian society and culture.

Analysis of current situation and future challenges.
HST 453 - Twentieth Century Europe
College of Arts and Sciences
3 credit(s)
Crosslisted with: PSC 453
Politics, society, war, and peace in Europe, 1919-1992. Nazi Germany, WW II, the Cold War, post-war reconstruction, social and economic transformations, and the revolutions of 1989 in Eastern Europe. Offered only in Florence.

## HST 454 - Family and Gender in Contemporary Italy

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: SOC 454, WGS 454
Family structures and gender relations in Italy from the Unification to the present. Offered only in Florence.

## HST 457 - Gender, Politics, Society in

 Europe (1400-1800)
## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 457, WGS 457
Relationship between the sexes in politics, philosophy, literature, and art. Emergence of a dissident "voice" relative to gender identity and social role, with implications for race and religion. Offered only in Florence.

## HST 470 - Experience Credit

## College of Arts and Sciences

## 1-6 credit(s)

Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## HST 480 - International Course

## College of Arts and Sciences

1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HST 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan
submitted by the student. Admission by consent of supervising instructor or instructors and the department. Repeatable

## HST 495 - Distinction Thesis in History <br> College of Arts and Sciences <br> 3 credit(s) Every semester Conducting research and writing a thesis for departmental distinction in History under the guidance of a faculty member.

## HST 496 - Distinction Thesis in History

College of Arts and Sciences
3 credit(s) Every semester
Conducting research and writing a thesis for departmental distinction in History under the guidance of a faculty member.
PREREQ: HST 495

## HST 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## HST 500 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HST 510 - Studies in African American History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: AAS 510
Particular periods or aspects of African American history.
Repeatable

## Humanities

## HUM 280 - International Course

College of Arts and Sciences
1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HUM 304 - The Other China: Ethnic Minorities and Development

## College of Arts and Sciences

2 credit(s) At least $1 x$ fall or spring
Offered only in Beijing. Examination of the impact of globalization and development on China's culturally diverse peoples, natural environment and animal habitats through onsite visits to tribal villages, water projects and nature preserves in Yunnan and Sichuan provinces in Southwest China.

## HUM 321-Christians, Jews and Muslims

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: JSP 321, MES 321, REL 321
Offered only in Madrid. Key historic encounters between the three versions of monotheism, with reference to the richness of past cultural and religious legacy rooted in the Mediterranean region.

## HUM 380 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HUM 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HUM 403 - China: Past, Present and Future

College of Arts and Sciences
2 credit(s) At least 1 x fall or spring
Presemester, two-week field studies seminar taught in Kunming or Xi'an, Beijing, and Shanghai. Introduction to the diversity of cultures and economies within China, overview of social conditions and forces that shape people's lives in the Peoples Republic of China.

## HUM 404 - 'AZAHAR' The Islamic Conquest and the Christian Reconquest <br> College of Arts and Sciences <br> 2 credit(s) Every semester

Crosslisted with: FLL 404, MES 404 Thirteen day interdisciplinary seminar. Lectures in situ. Artistic, historical, cultural monuments of Cordoba, Sevilla, Granada and Toledo or Salamanca. Theological, philosophical and historical thought as to recreate the artistic and cultural climate of medieval al-Andalus/Spain.

## HUM 420 - Studies in Renaissance Cultural History

## College of Arts and Sciences

3-4 credit(s) Irregularly
Topics in literature, fine arts, and religion between 1300 and 1600 in Italy, France, and England.
Topics to be determined by the faculty.
Repeatable

## HUM 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## HUM 480 - International Course

College of Arts and Sciences
1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HUM 501 - Humanism and the Arts in Renaissance Italy

## College of Arts and Sciences

6 credit(s) Only during the summer Interdisciplinary seminar on the interdependence of thought, art, and letters in Renaissance Italy and their dependence on social, political, religious, and cultural conditions. Given in Italy. Extensive field trips. Lectures and readings in English.

## International Relations

## IRP 334 - Contemporary Issues in Chile and Latin America

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 406, LAS 334, PSC 428,
SPA 334
Offered only in Santiago. This seminar features
in-situ lectures and activities in Chile, Argentina and Uruguay introducing important political, sociological and environmental issues in the Southern Cone region.

## IRP 401 - Global Policy Seminar

College of Arts and Sciences
3 credit(s) Every semester A traveling, all-day weekly seminar on how U.S. foreign and national security policy is made and "how Washington works." Features guest speakers and visits to agencies and offices. Offered only in Washington, D.C.

## IRP 402 - Global Policy Seminar II

## College of Arts and Sciences

3 credit(s) Every semester
A traveling, all-day weekly seminar on how U.S. foreign and national security policy is made and "how Washington works." Features guest speakers and visits to agencies and offices. Offered only in Washington, D.C., and in conjunction with IRP 401.

## IRP 403 - Global Issues

College of Arts and Sciences
3 credit(s) Every semester
Topics such as terrorism, weapons proliferation, AIDS, global warming, drugs, refugees, migration; lively debate, simulations. Offered only in Washington, D.C.

## IRP 404 - Global Political Economy Issue

College of Arts and Sciences
3 credit(s) Every semester
International trade and economic issues; the politics of economics and economic elements of global concerns. Guest experts, advocates from interest groups in the nation's capital. Offered only in Washington, D.C.

## IRP 412 - Global Governance: The United Nations System

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: PSC 412
The theory and practice of global governance and international diplomacy through an in-depth study of the United Nations system. Critique readings and discuss current UN-related events. Fulfills the IR capstone for International Law and Organizations (ILO). Permission of instructor. PREREQ: PSC 124 OR PSC 139

## IRP 413 - Global Governance Practicum

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Focuses on UN history, structure, and operation;
processes of international negotiation and UN politics; and resolution writing and negotiation techniques. Apply theories and concepts of international relations studied in the classroom through active participation in an international conference simulation.
PREREQ: PSC 124 OR PSC 139
Repeatable 1 time(s), 6 credits maximum

## IRP 417 - Human Rights in the Americas

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: AAS 417
Advanced introductional to international human rights laws and frameworks with a focus on Latin American and Caribbean states.

## IRP 424 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 424, LAS 424, PSC 424
Offered only in Santiago. The time period (1940-present) and its significance and contributions to the configuration of social, political and economic aspects of Chile today. Relies on primary sources, comparisons within the Southern Cone, and a focus on US role and influence during this period.

## IRP 426 - Cultures and Politics of Afghanistan and Pakistan

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: ANT 426, SAS 426
Introduction to Afghanistan and Pakistan, recent histories, cultures, current politics. Covers geography, religious systems, gender roles, economic systems, foreign policy issues, refugees, migration. Additional work required of graduate students.

## IRP 431 - Environment and Development in China

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Beijing. Addresses challenges in the environment and development arena in contemporary China, with analysis of conflict and resolution from multiple public policy perspectives.

IRP 444 - Culture, Business and Political Economics in East Asia<br>College of Arts and Sciences<br>3 credit(s) At least $1 x$ fall or spring<br>Crosslisted with: HST 444, INB 444, PSC 444<br>Offered only in Hong Kong. Examines the historical

and contemporary forces that shape the cultural, social and economic institutions in East Asia and how these institutions affect one another.

## IRP 450 - Undergrad Research Prog

## College of Arts and Sciences

1-6 credit(s) Every semester
Repeatable

## IRP 458 - Contemporary Issues in Turkey

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: PSC 458, SOC 458
Offered only in Istanbul. Key political and social issues in contemporary Turkey. Democratization; relationship between secularism, the role of the military and Islam in political life; foreign policy including Turkish-US relations; nationalism, minorities, gender, human rights. Additional work required of graduate students.

## IRP 468 - Middle East in Anthropological Perspective

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 468, MES 468
Anthropology of the social, cultural, geographical, and political realities of the Middle East. Additional work required of graduate students.

## IRP 471 - Global Internship

## College of Arts and Sciences

3 credit(s) Every semester Internship offered in Washington, D.C. as part of the Maxwell-Washington IR semester. Students accepted on the basis of academic qualifications.

## IRP 480 - International Course

## College of Arts and Sciences

1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable 1 time(s)

## IRP 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

Italian

## ITA 101 - Italian I

College of Arts and Sciences
4 credit(s) At least 1x fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Italian. No prior experience or admission by placement testing. Students cannot enroll in ITA 101 after earning credit for ITA 102, ITA 201, ITA 202, or higher.
PREREQ: REQUIRED PLACEMENT EXAM SCORE

## ITA 102 - Italian II

College of Arts and Sciences
4 credit(s) At least 1x fall or spring Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Italian. Students cannot enroll in ITA 102 after earning credit for ITA 201, ITA 202, or higher. PREREQ: ITA 101 OR REQUIRED PLACEMENT EXAM SCORE

## ITA 115 - Beginning Italian I

## College of Arts and Sciences

3 credit(s) Every semester
Offered in Florence only for architecture and studio arts students. Proficiency-based, for students with no prior experience. Prepares students in written and spoken language. Cannot receive credit for both ITA 115 and ITA 101.

## ITA 116 - Beginning Italian II

College of Arts and Sciences
3 credit(s) Every semester
Offered in Florence only for architecture and studio arts students. Continuing proficiency-based course which develops communicative abilities in speaking, listening and writing in culturally authentic contexts. Cannot receive credit for both ITA 116 and ITA 102.
PREREQ: ITA 101

## ITA 117 - Italian Community and

 Culture ICollege of Arts and Sciences
2 credit(s) Every semester Offered only in Florence. Develop language abilities through use of authentic materials and contexts.
COREQ: ITA 101

## ITA 118 - Italian Community and

 Culture IICollege of Arts and Sciences
2 credit(s) Every semester
Offered only in Florence. Develops language abilities through use of authentic materials and contexts.

PREREQ: ITA 101
COREQ: ITA 102

## ITA 201 - Italian III

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Italian. Students cannot enroll in ITA 201 after earning credit for ITA 202 or higher. PREREQ: ITA 102 OR REQUIRED PLACEMENT EXAM SCORE

## ITA 202 - Italian IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course which focuses on reading, discussing, and analyzing authentic texts as a basis for the expression and interpretation of meaning. Conducted in Italian. Students cannot enroll in ITA 202 after earning credit for a course higher than ITA 202.
PREREQ: ITA 201 OR REQUIRED PLACEMENT EXAM SCORE

## ITA 210 - Italian Oral Skills

## College of Arts and Sciences

1 credit(s) Every semester
Conversational Italian.
PREREQ: ITA 102
Repeatable 1 time(s), 2 credits maximum

## ITA 215 - Intermediate Italian I

## College of Arts and Sciences

3 credit(s) Every semester
Offered in Florence only for architecture and studio arts students. This course reinforces students linguistic skills while expanding their knowledge of language structures and building on vocabulary. Student cannot receive credit for both ITA 215 and ITA 201
PREREQ: ITA 102

## ITA 216 - Intermediate Italian II

College of Arts and Sciences
3 credit(s) Every semester
Offered in Florence only for architecture and studio arts students. This course reinforces students linguistic skills while expanding knowledge of previously acquired language structures and building on vocabulary. Students cannot receive credit for both ITA 216 and ITA
202
PREREQ: ITA 201

## ITA 217 - Italian Community and Culture III

## College of Arts and Sciences

2 credit(s) Every semester

Offered only in Florence. Develops language abilities through use of authentic materials and contexts.
PREREQ: ITA 102
COREQ: ITA 201

## ITA 218 - Italian Community and

 Culture IVCollege of Arts and Sciences
2 credit(s) Every semester
Offered only in Florence. Develops language abilities through use of authentic materials and contexts.
PREREQ: ITA 201
COREQ: ITA 202

## ITA 315 - Italian Practicum I

College of Arts and Sciences
1 credit(s) Every semester
Reviews major grammatical structures, prepares students for interactive dynamics of Italian language classroom; develops a richer vocabulary through newspaper and magazine articles. Offered only in Florence to Option II students.
PREREQ: ITA 202

## ITA 316 - Italian Practicum II

## College of Arts and Sciences

1 credit(s) Every semester Consolidates students Italian language skills after completion of classes at Centro di Cultura of University of Florence. Further exposes students to aspects of Italian culture/heritage. Offered only in Florence to Option II students.
PREREQ: ITA 202

## ITA 325 - Advanced Language Usage

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Furthers the mastery of Italian through selected readings, targeted discussion, and weekly compositions.

## ITA 326 - Italy Today: Language, Media and Culture in Contemporary Italy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Analysis and discussion of current cultural issues in Italy. Designed to strengthen accuracy and fluency in oral and written expressions.

## ITA 376 - Contemporary Italian Literature

## College of Arts and Sciences

3 credit(s) Irregularly
Readings in representative Italian authors since 1950. Special emphasis on short-stories and novels.

## ITA 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ITA 409 - Dante's Comedy: Inferno

## College of Arts and Sciences

3 credit(s) Irregularly
Close reading of the first part of one of the masterpieces of World Literature. Dante's poem is a major work that problematizes literary, philosophical, theological and political issues.

## ITA 412 - Boccaccio's Decameron

## College of Arts and Sciences

3 credit(s) Irregularly
A critical reading of the "Decameron", by Giovanni Boccaccio (1313-1375.) A masterpiece of medieval literature, the "Decameron" will be studied with particular attention to its historical context and its literary form (short stories.)

## ITA 421 - Patterns of Modernity in 20th <br> Century Italian Literature

College of Arts and Sciences
3 credit(s)
Italian literary works marking the transition of Italy
from an agricultural to an urban/technological society. Impact of technology on the Futurist avant-garde, concepts of national identity and modern self. Offered only in Florence. PREREQ: ITA 202

ITA 422 - Mass Communication in the Italian Culture

## College of Arts and Sciences

3 credit(s)
A comparative study of journalism; including the influence of political patronage on editorial biases. Discussion includes historical overview of Italian advertising and the broadcasting industry. Offered only in Florence.

## ITA 423 - Contemporary Italian Language and Society

College of Arts and Sciences
3 credit(s)
A variety of primary source linguistic tools newspapers, magazines, advertisements, radio/ TV broadcasts, films, and songs - to examine and analyze key aspects of contemporary Italian language and culture. Taught in Italian. Offered only in Florence.

## ITA 432 - Verga, Verismo, Southern Novel

## College of Arts and Sciences

## 3 credit(s)

Representations of southern Italian life reflected in the works of Verga and selected novelists.

## ITA 434 - Africa in Italian Literature

## College of Arts and Sciences

3 credit(s) Irregularly
Study of the colonial experience in the African continent as described by Italian writers between the end of the 19th century and the first half of the 20th century; and its reverberations in contemporary Italy.

## ITA 441 - Modern and Contemporary Italian Theater <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Study of major Italian plays fro 16th century to contemporary times.

## ITA 442 - Italian Novel Under Fascism

## College of Arts and Sciences

3 credit(s)
Selected novels attesting to cultural life in Italy under Fascism.

ITA 445 - Class, Ideology and the Novel After 1968

## College of Arts and Sciences

3 credit(s)
Selected novels studied as significant sources of ideological discourses in 20th century Italian life.

## ITA 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Japanese

## JPS 101 - Japanese I

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Japanese. No prior experience or admission by placement testing. Students cannot enroll in JPS 101 after earning credit for JPS 102, JPS 201, JPS 202, or higher. PREREQ: REQUIRED PLACEMENT EXAM SCORE

## JPS 102 - Japanese II

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Japanese. Students cannot enroll in JPS 102 after earning credit for JPS 201, JPS 202, or higher. PREREQ: JPS 101 OR REQUIRED PLACEMENT EXAM SCORE

## JPS 201 - Japanese III

## College of Arts and Sciences

4 credit(s) At least 1 x fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Japanese. Students cannot enroll in JPS 201 after earning credit for JPS 202 or higher. PREREQ: JPS 102 OR REQUIRED PLACEMENT EXAM SCORE

## JPS 202 - Japanese IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Japanese. Students cannot enroll in JPS 202 after successfully completing a course higher than JPS 202.
PREREQ: JPS 201 OR REQUIRED PLACEMENT EXAM SCORE

## JPS 301 - Japanese V

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Japanese
PREREQ: JPS 202

## JPS 302 - Japanese VI

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Japanese.
PREREQ: JPS 301

## Judaic Studies Program

JSP 100 - Selected Topics
College of Arts and Sciences
1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## JSP 107 - Religion, Literature, Film

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 107
Literary and cinematic approaches to religious life, focusing on Jewish and Christian communities. Special attention to the Bible, Yiddish culture, post-Holocaust writing, and Israel; topics include land, tradition, humor, science, and violence.

## JSP 114 - The Bible

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: REL 114
Jewish and Christian scriptures in their ancient Near Eastern and Hellenistic contexts, with particular attention to their literary forms, the history of their composition, and their role in the development of Western religions and cultures. Credit is not given for REL/JSP 114 and either REL/JSP 215 or REL 217.

## JSP 131 - Great Jewish Writers

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: LIT 131, REL 131 Introduction to fiction by Jewish authors. Topics include modernization, rebellion against authority, alienation, childhood, superstition, and the holocaust. Some films included.

## JSP 135 - Judaism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 135
Survey of Judaic ideas, values, and cultural expressions as found in biblical, talmudic, medieval, mystical, and modern texts.

## JSP 215 - The Hebrew Bible

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: REL 215
The Hebrew Bible (often called Old Testament) in English translation, with particular attention to its literary form, its cultural context in the ancient Near East, the history of its development, and its role in Western religions and cultures. Credit is not given for REL/JSP 114 and either REL/JSP 215 or REL 217.

## JSP 231 - Jewish Literature

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: LIT 231, REL 231

Survey of major works in the Jewish tradition, including Hebrew and Yiddish prose in translation. Themes include nature, culture, exile, humor, satire, and talking takhlis.

## JSP 235 - Travel Narratives and Pilgrimages

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: LIT 235, REL 235
Study of secular and spiritual travel narratives, both factual and fictional. Included are tales of exploration, shipwreck, and pilgrimage to the Holy Land, which played a key role in literary history.

## JSP 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## JSP 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## JSP 301 - Advanced Hebrew I

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: HEB 301
Hebrew literature in the original, ranging from
the Bible to contemporary fiction, including
19th-century works such as Hasidic tales and Enlightenment satires.
PREREQ: HEB 202
Repeatable 1 time(s), 6 credits maximum

## JSP 303 - Advanced Hebrew II

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: HEB 303
Continuation of HEB/JSP 301, using more advanced texts

## JSP 307 - The Temple and the Dead Sea Scrolls

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: REL 307
History and literature of Second Temple Judaism including the canonization of scripture, origins of the synagogue, apocalyptic literature, the Dead Sea Scrolls, and other developments leading to early Christianity and rabbinic Judaism.

## JSP 308 - Ancient Judaism and the Origins of Christianity

## College of Arts and Sciences

3 credit(s) Every semester Crosslisted with: MES 308, REL 308 Offered only in Madrid. Social, cultural, intellectual, and historical conditions which surrounded the birth of this new world religion in its ancient Mediterranean cradle--from Mesopotamia and Egypt to Greece and ancient Rome.

## JSP 311 - The Bible as Literature

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 311
A study of one literary genre (such as prose narrative, didactic poetry, or hymnody) through the books of the Hebrew Bible in comparison to other ancient literatures.

## JSP 316 - The Torah/Pentateuch as a

 Scripture
## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: REL 316
How the Pentateuch became the Torah, the first Jewish scripture: its origins, rhetorical use, performance in various media, and ritual function as an iconic book.

## JSP 321 - Christians, Jews and Muslims

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HUM 321, MES 321, REL 321
Offered only in Madrid. Key historic encounters between the three versions of monotheism, with reference to the richness of past cultural and religious legacy rooted in the Mediterranean region.

## JSP 331 - European and American Jewish Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: REL 331
Readings of 20th-century fiction and drama, focusing on works by Schnitzler, Kafka, Wiesel, P. Levi, Yezierska, H. Roth, I.B. Singer, Malamud, P. Roth, and Ozick.

## JSP 332 - Jewish Textual Tradition

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 332
Students explore the Jewish textual tradition. Topics vary from year to year. Texts include Talmud, midrash, medieval philosophy and mysticism.

Course can be repeated for credit. Repeatable 2 time(s), 9 credits maximum

## JSP 333 - Yiddish Literature in Translation

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: LIT 333, REL 333
Survey of Yiddish literature, with special attention to the classic Yiddish authors, Yiddish theater, modernism, and Yiddish women writers. Themes of minority culture, class struggle, hasidism, and the decline of the Shtetl.

## JSP 334 - Modern Judaism

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 334
The impact of modernity on Jewish life and
thought. Issues and themes vary.

## JSP 335 - Israeli Literature and Culture

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: LIT 335, MES 335 , REL 335
Literary and cultural approach to the modern history of Israel, with special attention to conflicts that have arisen during the Zionist project.

## JSP 337 - Shoah: Responding to the Holocaust <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Crosslisted with: REL 337 <br> Historical, literary, and philosophical representations of, and responses to, the Nazi genocide. Philosophical, theological, and ethical challenges raised by the Holocaust.

## JSP 338 - American Judaism

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 338
Students explore the relation between culture and religion across a diverse range of American Jews and Jewish communities. Particular attention is paid to the process of acculturation and assimilation and to the reinvention of Judaism.

## JSP 342 - Religion and Politics in the Israeli-Palestinian Conflict

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: MES 342, PSC 342, REL 342
Considers the extent to which religion matters in an enduring ethno-nationalist conflict. Approaches the Israeli-Palestinian conflict from an interdisciplinary perspective that explores the intersection of religion and politics.

## JSP 362 - Nazi Germany and the Holocaust <br> College of Arts and Sciences

3-4 credit(s) At least $1 x$ fall or spring
Crosslisted with: HST 362, QSX 362
Rise of Nazism, fall of the Weimar Republic, fascist ideology, everyday life under Nazism for "Aryans," Jews, disabled people, Roma, gay people, AfroGermans, others. Planning for genocide, the Holocaust, reactions and memories after 1945.

## JSP 379 - American Slavery and the Holocaust

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 379, PSC 379
An in-depth study of the normative structure of both American Slavery and the Holocaust, focusing upon the ways in which each institution conceived of its victims and the character of the moral climate that prevailed in each case.

## JSP 380 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable 1 time(s), 12 credits maximum

## JSP 392 - History of the Holocaust

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HST 392
Study of the events and issues of historical interpretation in the Holocaust, 1933-1945. Attitudes and behavior of Nazi perpetrators, Jewish victims, and bystanders.

## JSP 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## JSP 401 - Hebrew Literature in the Original

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: HEB 401
The course retraces the history of Hebrew writing in Europe and Palestine before 1948
PREREQ: HEB 301

## JSP 435 - Modern Jewish Thought

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: PHI 435, REL 435
The philosophical implications of Judaism's encounter with modernity. Close readings of selected modern Jewish thinkers. Issues and figures vary.
Repeatable 3 time(s), 9 credits maximum

## JSP 439 - Jewish Studies Seminar

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 439
Interdisciplinary study of special topics in the Jewish tradition.
Repeatable 2 time(s), 9 credits maximum

## JSP 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Irregularly
Participation in s discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## JSP 490 - Independent Study

## College of Arts and Sciences

$1-6$ credit(s) At least $1 x$ fall or spring In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## JSP 499 - Honors Capstone Project

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable

## JSP 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## World Language Program: Korean

## KOR 101 - Korean I

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring

Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Korean. Students cannot enroll in KOR 101 after earning credit for KOR 102, KOR 201, KOR 202, or higher.

## KOR 102 - Korean II

College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Korean. Students cannot enroll in KOR 102 after earning credit for KOR 201, KOR 202, or higher. PREREQ: KOR 101

## KOR 180 - International Course

College of Arts and Sciences
1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## KOR 201 - Korean III

College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Korean. Students cannot enroll in KOR 201 after earning credit for KOR 202 or higher.
PREREQ: KOR 102

## KOR 202 - Korean IV

## College of Arts and Sciences

4 credit(s) At least 1 x fall or spring
Continuing proficiency-based course which further refines and expands previously acquired linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Activities conducted in Korean. Students cannot enroll in KOR 202 after earning credit for a course higher than KOR 202.
PREREQ: KOR 201

## KOR 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## Latino-Latin American Studies

## LAS 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## LAS 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## LAS 302 - Introduction to Latin American Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: SPA 322
Modern Latin American literature using new methods of study, basically Cultural Semiotics. PREREQ: SPA 202

## LAS 313 - Modern Latin America

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: HST 323
The turmoil of the postindependence period and the search for economic and political stability. Reasons for and consequences of export-led growth. The role of the United States in preserving the status quo in the Americas.

## LAS 315 - Advanced Language Usage

## College of Arts and Sciences

3 credit(s)
Crosslisted with: SPA 302
Advanced grammar, composition, and conversation.

## LAS 318 - South American Cultures

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 322
Archaeology and cultural history. Racial, linguistic, and cultural areas from 1492 to today. Studies of contemporary Indian and Mestizo populations.

## LAS 321 - Latin American Development: Spatial Aspects

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: GEO 321
Spatial dimensions of development process in Latin America since the 1930s in a variety of
contexts and at several scales. Variety of spatial models that may be applied.

## LAS 322 - Colonial Latin America

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: HST 322, SPA 325
Development of Amer-Indian civilization and the Spanish conquests. Evolution of the Spanish American economy and the unique American culture. Growth of the plantation economy of Brazil. The movements toward independence. PREREQ: SPA 201 OR SPA 202 OR (SPA 300 OR ABOVE)

## LAS 324 - Recent Latin American History

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: HST 324
Developments since World War I. Political, economic, and social change and growth of nationalism.

## LAS 325 - Colonialism in Latin America

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Processes of geographical change in latin America from the sixteenth to the early twentieth century. Reconstruction of geographies of Latin America at critical periods.

LAS 326 - Beyond the Screen: Latin American and Spanish Film
College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 326
Film theories (historical, auteur, national, etc) and terminology, trends in film, women in film, problems with cultural representation.

## LAS 333 - Politics of Latin America

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: PSC 333
Political processes and institutions in Latin America. The region's experience with modernization.

## LAS 334 - Contemporary Issues in Chile and Latin America

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 406, IRP 334, PSC 428, SPA 334
Offered only in Santiago. This seminar features in-situ lectures and activities in Chile, Argentina and Uruguay introducing important political, sociological and environmental issues in the Southern Cone region.

## LAS 335 - Mexico and the United

 StatesCollege of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: PSC 334
The history and politics of Mexico, with special attention to relations between Mexico and the United States and the politics of immigration, NAFTA, the drug trade, and other bilateral issues.

## LAS 343 - Latina Feminist Theories

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: LIT 343, WGS 343
Examines Latina feminist and queer thought and methods for social transformation; places US women of color feminisms in conversation with Latina/o and Latin American histories, identities, cultural productions, and activisms.

## LAS 358 - Latin American International

 Relations
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: PSC 358
Examines Organization of American States and other regional institutions. Considers how regional cooperation efforts have been shaped by political, economic, and cultural diversity of the countries in the region and by the changing global context.

## LAS 371 - Gender in Latin American History

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Crosslisted with: HST 371, WGS 371
History of women and gender relations from colonial period to the present. Influence of race, class, and ethnicity on gender. Relation of gender to labor, family, sexuality, and politics.

## LAS 372 - Race in Latin America

College of Arts and Sciences
3 credit(s)
Crosslisted with: HST 372, NAT 372
Race relations in Latin America from the late colonial era to present. Indigenous, immigrant, and Afro-Latin American experiences and how they have changed over time. Relations of race to national identity.

## LAS 402 - Hispanic Journalistic Practices

## College of Arts and Sciences

3 credit(s)
Crosslisted with: SPA 402
Examines journalism and media in Spanish as they are practiced in Spanish-speaking countries and the U.S. Conducted in Spanish. [Effective
spring 2009]

## LAS 424 - Dictatorships, Human Rights, and Historical Memory in the

 Southern Cone
## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 424, IRP 424, PSC 424
Offered only in Santiago. The time period (1940-present) and its significance and contributions to the configuration of social, political and economic aspects of Chile today. Relies on primary sources, comparisons within the Southern Cone, and a focus on US role and influence during this period.

## LAS 425 - Post-colonialism and Philosophy

## College of Arts and Sciences

3 credit(s)
Crosslisted with: PHI 425
The philosophical analysis and critique of colonialism's representations of other cultures and justifications for intervention, as well as debates over effective forms of resistance.

## LAS 433 - Business Spanish

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: SPA 433
Language usage in relation to Spanish and Latin American business.

## LAS 439 - Community Outreach: Language in Action

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SPA 439
Language immersion in the Spanish-speaking community in the Syracuse area. Emphasis on improving spoken and written Spanish through a service learning component. Additional work required of graduate students.
PREREQ: SPA 301

## LAS 461 - Nobel Prize Writers of the Spanish-Speaking World

## College of Arts and Sciences

3 credit(s)
Crosslisted with: SPA 461
Presents works by 10 Nobel Laureates in
Spanish. 301

## LAS 463 - Contemporary Latin American Theater <br> College of Arts and Sciences <br> 3 credit(s) <br> Crosslisted with: SPA 463 <br> Introduction to major theater works and

movements in 20th-century Latin America.

## LAS 465 - Literature and Popular Culture

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 465
Mass culture and post modernism. Interactions between mass media culture, art, and politics in Latin America.

## LAS 467 - Film and Literature

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 467
A critical study of books made into film in Latin American literature.

## LAS 471 - Contemporary Latin <br> American Literature

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 471
Latin American literature from the 1920s to the present. Emphasizes the development of the contemporary novel.

## LAS 475 - Women, Myth and Nation in Latin American Literature

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 475, WGS 475
Myths about women and nation. Modern interpretations and reconstructions of these myths in contemporary literature by Latin American women writers. Literary texts with theories on myth. Representation and "real" constructions of feminine and national identities in different regions of Latin America.

LAS 479 - Perspectives on Mexico and Central America: Literature, Art, Film
College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 479
Literary works, films and arts created in Central America. Topics include perspectives on indigenism, feminine and masculine identities, religion, politics, technology and its future implications on those countries.

## LAS 480 - International Course

College of Arts and Sciences
1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level,
title, and grade for the student's transcript. Repeatable

## LAS 481 - The Literature of Latinos in the United States

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 481
Short stories and poetry written in Spanish by Latinos. Themes such as identity, language, and culture. Political, social, and cultural readings.

## LAS 489 - Hispanic Caribbean Narrative and Film

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 489
Texts in Spanish by Caribbean writers. Explores themes such as women, politics, death, identity. Readings are accompanied by films and followed by critical theory and analysis.

## LAS 493 - Afro-Hispanic Topics in Caribbean Literature

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 493
Caribbean African-Hispanic literature (poetry and short stories) with different areas of social and political interest. Emphasis on different Caribbean religions.
PREREQ: SPA 301

## LAS 494 - Hispanic Caribbean Literature

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Crosslisted with: SPA 494
This course studies the Spanish Caribbean's multiple identities through the discussion of a series of literary and cultural texts. The course concentrates on race, gender, sexuality, migrations, postcolonial relations, popular culture and diasporas.

## LAS 495 - Marginal Cultures in Hispanic Caribbean Literature

College of Arts and Sciences
3 credit(s)
Crosslisted with: SPA 495
Caribbean poetry and short stories about race, gender, and homoeroticism. Includes social, political, and cultural readings.

## LAS 497 - Text and Context in Cuban Revolutionary Literature <br> College of Arts and Sciences <br> 3 credit(s) <br> Crosslisted with: SPA 497

Literary works of the Cuban revolutionary period by Cuban and Cuban-American authors from different literary and political points of view.

## LAS 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## LAS 520 - Research on Latin America

## College of Arts and Sciences

1-3 credit(s) Every semester
Reading and special work
Repeatable

## LAS 523 - Globalization and its Discontents in Latin America <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring <br> Crosslisted with: ANT 523

Effects of and reactions to globalization and neoliberal policies in rural communities, including industrialization, rural-urban and international migration and ethnic movements.

## LAS 537 - Environmental Policy in a Development Context

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: GEO 537
Offered only in Santiago. Examines historical/ intellectual/ material processes that transformed nature into natural resources to be exploited; ways global political process has guided global responses to environmental problems; Chilean environmental policy over the last 20 years.

## Latin

## LAT 101 - Latin I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Introductory course which prepares students to acquire a reading knowledge of classical Latin, focusing on morphology and syntax, and its role in the culture and literature of ancient Roman society. Students cannot enroll in LAT 101 after earning credit for LAT 102, LAT 201, LAT 202, or higher.

## LAT 102 - Latin II

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Continuing course with emphasis on morphology and syntax. Introduction to examples of unsimplified Latin prose of the Republic and Empire, read and interpreted within the cultural context of Greco-Roman society. Students cannot
enroll in LAT 102 after earning credit for LAT 201, LAT 202, or higher.
PREREQ: LAT 101

## LAT 201 - Latin III

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Continuing course with review of morphology and syntax and further study of idioms, rhetorical figures, and syntactic peculiarities. Reading and study of representative prose authors. Students cannot enroll in LAT 201 after earning credit for a course higher than LAT 201.
PREREQ: LAT 102

## LAT 310 - Latin Prose Authors

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Readings from selected authors. Review of grammar and syntax.
Repeatable 3 time(s), 12 credits maximum

## LAT 320 - Latin Poets

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Readings from selected Latin poets. Review of grammar and syntax. Latin metrics and prosody. Repeatable 2 time(s), 9 credits maximum

## LAT 410 - Advanced Latin Prose

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Readings from selected Latin prose authors. PREREQ: LAT 310 OR LAT 320

## LAT 420 - Advanced Latin Poetry

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Readings from selected Latin poets.
PREREQ: LAT 310 OR LAT 320

## Linguistics

## LIN 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## LIN 201 - The Nature and Study of Language

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring

Introduction to the study of human language. Language change and diversity, usage, meaning, phonetics, grammatical description, and language learning.

## LIN 202 - Languages of the World

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: ANT 202
Introduction to Universal Grammar. Similarities and differences in structures of human languages. Syntax and morphology. Theory development. PREREQ: LIN 201

## LIN 251 - English Words

College of Arts and Sciences
3 credit(s)
An analysis of English words, their structure, history, meaning, and formation from a theoretically informed linguistic perspective. The course is primarily concerned with the words borrowed from the classical languages.

## LIN 301 - Introductory Linguistic Analysis

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 601
Techniques and methods of modern linguistics, including specific analysis of phonetic, phonological, morphological, and syntactic aspects of natural language structure. Additional work required of graduate students.
PREREQ: LIN 202

## LIN 400 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## LIN 411 - Semantics of Human Languages

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: LIN 611 Introduction to analysis of meaning in natural languages. Additional work required of graduate students.
PREREQ: LIN 301

## LIN 412 - Pragmatics: Meaning and Context

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: LIN 612 Introduction to aspects of linguistic meaning that are dependent on context and other non-linguistic
factors.
PREREQ: LIN 301

## LIN 421 - Introduction to Methodology of Teaching Languages: English/ Foreign Language Teaching

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 621
Topics include history and theories of language teaching; the teaching of content (grammar, sound system, lexis, and pragmatics) and skills; and assessment. Additional work required of graduate students.
PREREQ: LIN 301 OR (SPA 435 AND SPA 436)

## LIN 422 - Advanced Methods of

 Teaching Languages: English/Foreign Language Teaching
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: LIN 622
Topics include curriculum development, technology in language learning, global dialects, individual differences, second language acquisition, and professional development.
Students complete a practicum. Additional work required of graduate students. PREREQ: LIN 421

## LIN 426 - Structure of Standard Arabic

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARB 426
Double Numbered with: LIN 626
Structure of Standard Arabic, including the phonology, morphology, syntax, and semantics. Includes social and historical issues related to the development of the Arabic language. Additional work required of graduate students.

## LIN 431 - Phonological Analysis

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 631
Introduction to analysis of sound systems of natural languages. Extra work required of graduate students.
PREREQ: LIN 301

## LIN 441 - Syntactic Analysis

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 641
Introduction to analysis of morphological and syntactic systems of natural languages. Extra work required of graduate students.
PREREQ: LIN 301

## LIN 451 - Morphological Analysis

## College of Arts and Sciences

3 credit(s)
Double Numbered with: LIN 651
An introduction to morphological theory and analysis in contemporary generative linguistics. The course familiarizes students with the main topics that interest morphologists by exposing students to a range of cross-linguistic data. PREREQ: LIN 301

## LIN 461 - Introduction to Historical Linguistics

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Double Numbered with: LIN 661 An introduction to traditional terminology and methods, and to more recent studies in formal, explanatory theories of language change. Theories of phonological as well as syntactic change. Additional work required of graduate students. PREREQ: LIN 301

## LIN 471 - Dimensions of Bilingualism and Multiculturalism

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Double Numbered with: LIN 671 Foundations, theory, and practice of bilingual/ bicultural education. Critical concepts of linguistic, sociolinguistic, psycholinguistic issues and methods as applied to bilingualism/ multiculturalism. Additional work required of graduate students.

## LIN 472 - Language, Culture, and Society

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ANT 472, WGS 472
Double Numbered with: LIN 672
Cross-cultural survey of the role of language in culture and society, including cognition and language usage along the dimensions of class, gender, race, ethnicity, and social status.

## LIN 473 - Language Variation and Change

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: LIN 673
An exploration of the theories, qualitative and quantitative methods, and the ideological, social, cultural, linguistic and structural factors involved in the study of language variation and change. Additional work required of graduate students.

## LIN 475 - Forensic Linguistics

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: LIN 675
Examines the application of core linguistic concepts,( including concepts of sociopsychological/pragmatic/discourse analysis), and interpretive techniques to investigate crimes, and other legal matters in which language data is used as pertinent evidence. Additional work required of graduate students.

## LIN 481 - Global Communication Through World Englishes

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: LIN 681 World Englishes pose unique challenges for linguists, language pedagogues, business leaders, communication experts, and researchers in intercultural/ international communication. Various topics reflecting these challenges are presented. Additional work required of graduate students.

## LIN 491 - Universal Grammar and Second Language Acquisition

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: LIN 691 Basic concepts and results of research in grammatical theory and second language acquisition and implications for the understanding of the performance of second language acquirers. Additional work required of graduate students. PREREQ: LIN 441

## LIN 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## LIN 571 - Topics in Sociolinguistics

College of Arts and Sciences
3 credit(s) Upon sufficient interest
Crosslisted with: ANT 571, SOC 571
Functions of language in society. Geographical, socioeconomic, and male-female differentiation. Functions of various types of speech events. Requirements include a research project. Repeatable 1 time(s), 6 credits maximum

## LIN 580 - International Course

College of Arts and Sciences
1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution
and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable

## LIN 591 - Second Language Acquisition

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Survey of research on second-language acquisition; biological, cognitive, effective, and social factors.
PREREQ: LIN 301 OR 601

## Literature in English <br> Translation

## LIT 101 - Introduction to Classical Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Major popular and influential genres of classical literature. Heroic tradition in epic and tragic spirit of epic and drama. Birth of comedy.

## LIT 102 - Introduction to Classical Literature

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Major popular and influential genres of classical literature. Heroic tradition in epic and tragic spirit of epic and drama. Birth of comedy.

## LIT 131 - Great Jewish Writers

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 131, REL 131
Introduction to fiction by Jewish authors. Topics include modernization, rebellion against authority, alienation, childhood, superstition, and the holocaust. Some films included.

## LIT 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## LIT 203 - Greek and Roman Epic in English Translation

College of Arts and Sciences
3 credit(s) Irregularly
Apollonius, Hesiod, Homer, Lucretius, and Virgil.

No knowledge of Greek or Latin required.

## LIT 211 - Greek and Roman Drama in English Translation

College of Arts and Sciences
3 credit(s) Irregularly
Selected works of the Greek and Roman dramatists. No knowledge of Greek or Latin required.

## LIT 226 - Dostoevsky and Tolstoy

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Lectures, readings, discussions, and reports on Dostoevsky's and Tolstoy's major novels.

## LIT 227 - Pasternak and Solzhenitsyn

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The search for the meaning of human existence, for universal truths in life: the importance of individual freedom, morality, human affection and suffering in the caldron of twentieth-century Soviet socialism.

## LIT 231 - Jewish Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: JSP 231, REL 231 Survey of major works in the Jewish tradition, including Hebrew and Yiddish prose in translation. Themes include nature, culture, exile, humor, satire, and talking takhlis.

## LIT 235 - Travel Narratives and Pilgrimages

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: JSP 235, REL 235
Study of secular and spiritual travel narratives, both factual and fictional. Included are tales of exploration, shipwreck, and pilgrimage to the Holy Land, which played a key role in literary history.

## LIT 241 - Dante and the Medieval

## World

## College of Arts and Sciences

3 credit(s) Irregularly
Passages from the Divine Comedy as an encyclopedic work illuminating vital historical, intellectual, and cultural forces in the medieval world.

## LIT 242 - Petrarch and the Renaissance World

## College of Arts and Sciences

3 credit(s) Irregularly
This course is a sequel to LIT 241. Petrarch's poetry and prose will provide the point of
departure for an examination of issues and problems in the Renaissance.

## LIT 243 - Cultures of Italy from the Middle Ages to the Present <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Historically based survey of life in Italy from the time of Dante to our time with emphasis on political, social and art histories.

## LIT 245 - Florence and Renaissance Civilization

## College of Arts and Sciences

3 credit(s) Irregularly
Florence as the linguistic, literary, and cultural center of early medieval and modern Italian civilization.

## LIT 255 - Cervantes in English

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Analysis and interpretation of Don Quixote and selected shorter works. Not recommended for Spanish majors.

## LIT 257 - Italian Cinema and Culture Since World War II

## College of Arts and Sciences

3 credit(s)
Selected films of DeSica, Fellini, Visconti, and others as significant documents of Italian life in the post-war period and beyond.

## LIT 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## LIT 301 - French Cinema Vs. Hollywood

## College of Arts and Sciences

3 credit(s)
A comparative study of French and American cinema across various themes and genres. Offered in Strasbourg only.

## LIT 331 - Russian Culture Through

 Fiction and Film
## College of Arts and Sciences

3 credit(s)
Crosslisted with: RUS 331
Documentary films and readings of short fiction. Elements of Russian culture and provides an understanding of Russian national identity as it has developed from Kievan Russian to the present day.

## LIT 332 - Russian Fairy Tales and Folklore

## College of Arts and Sciences

3 credit(s)
Crosslisted with: RUS 332
The history and development of fairy tales in Russia. Begins with oral tales, influenced by early folklore and pagan rituals, and progresses through literary fairy tales and film versions.

## LIT 333 - Yiddish Literature in Translation

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: JSP 333, REL 333
Survey of Yiddish literature, with special attention to the classic Yiddish authors, Yiddish theater, modernism, and Yiddish women writers. Themes of minority culture, class struggle, hasidism, and the decline of the Shtetl.

## LIT 335 - Israeli Literature and Culture

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: JSP 335, MES 335 , REL 335
Literary and cultural approach to the modern history of Israel, with special attention to conflicts that have arisen during the Zionist project.

## LIT 336 - Arabic Cultures

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ARB 336 , MES 336
Arabic culture through geography, literature, religion (Islam and other religions), ethnic groups, social divisions, films, the media, music, art, food, gender issues, and everyday life.

## LIT 343 - Latina Feminist Theories

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: LAS 343, WGS 343
Examines Latina feminist and queer thought and methods for social transformation; places US women of color feminisms in conversation with Latina/o and Latin American histories, identities, cultural productions, and activisms.

## LIT 361 - Russian Literary Film Adaptations

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: RUS 361
Study of film adaptations of Russian literary classics.

LIT 362 - Russia Today<br>College of Arts and Sciences<br>3 credit(s) Irregularly

Crosslisted with: RUS 362
Using scholarly texts, newspapers, blogs, digital audio, film, recent literature, and web videos, we will investigate topics that define contemporary Russia and make it seem familiar yet different to us in the West.

## LIT 381 - Italian and European Theater 1500-1700

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: DRA 381,WGS 381
Secular and professional drama as it emerged in Renaissance Italy and spread to Spain, England, and France. Selected works of Machiavelli, Monteverdi, Cervantes, Calderon, Shakespeare, Molière, Behn and others (in English). Offered only in Florence.

## LIT 382 - Asian Cinema

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Offered only in Hong Kong. Selection of classic and contemporary films by Asian filmmakers that exemplify cultural and aesthetic traditions, values, and trends.

## LIT 421 - Classical Mythology

## College of Arts and Sciences

3 credit(s)
Crosslisted with: CLA 421, REL 421
Myths and rituals of Greek mythology and religion. Ancient poets/playwrights and important mythological themes found in later Western religious/artistic traditions. Offered only in Florence.

LIT 423 - Italian Cinema: 1945 to Present

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Florence. Survey of Italian cinema since 1945. Analyzes major works by Italian directors, considering the evolution of Italian cinema as an art form and a reflection of major social and political problems in post-war Italy.

## LIT 442 - From Dante to Calvino: <br> Italian Literature in Translation

## College of Arts and Sciences

3 credit(s)
Italian writers from the 14th century to the 20th century. Offered only in Florence.

## LIT 443 - Dante, Petrarch, and Boccaccio

## College of Arts and Sciences

3 credit(s)
Early, central Italian literature and society. Dante's ""Comedy,"" Petrarch's ""Canzoniere,"" Boccaccio's
""Decameron." Offered only in Florence.

## LIT 445 - Comedy in Italy: From Ancient to Modern Times

College of Arts and Sciences
3 credit(s)
Comedy, Italian style, from ancient Roman stages to the international scene. Laughter, farces, cartoons, films, and the use of comic masks. Students read plays by Plautus, Machiavelli, Fo, Shakespeare, and Moliere. Theater excursions. Student performance option. Offered only in Florence.

## LIT 499 - Honors Capstone Project

College of Arts and Sciences
1-6 credit(s)
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable

## LIT 510 - Studies in Greek and Roman Literature in Translation <br> College of Arts and Sciences <br> 3 credit(s) Upon sufficient interest <br> Selected topics in Greek or Roman literature studied in English. No knowledge of Greek or Latin required. <br> Repeatable

## LIT 521 - Mythhology

College of Arts and Sciences
3 credit(s) Irregularly
Greek, Roman, and Norse myths. Knowledge of foreign languages not required.

## Law in the Liberal Arts

## LLA 201 - Elements of Law

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Provides an introduction to law and legal institutions. The course is designed to prepare lower-division undergraduates for the further study of legal topics in departments across the College of Arts and Sciences.

## Mathematics

## MAT 112 - Algebraic Operations and Functions <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Algebraic operations. Linear and quadratic equations, applications. Exponents and logarithms. Credit not given for MAT 112 after receiving a C or better in MAT 183 or above.

## MAT 117 - Foundational Mathematics via Problem Solving I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
One course in two-course sequence. Number concepts and relationships (including concepts of numeration, operations, number theory), probability, statistics, and functions. Emphasizing learning through problem solving.

## MAT 118 - Foundational Mathematics via Problem Solving II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring One course in a two-course sequence. Rational number concepts, geometric concepts, measurement concepts, algebraic concepts, and structures. Emphasizing learning through problem solving.

## MAT 120 - Supplemental Basic Mathematics

## College of Arts and Sciences

1 credit(s) Irregularly
Is as needed for further coursework. Does not satisfy any part of the quantitative skills requirement.
COREQ: MAT 121 OR MAT 122 OR MAT 183 OR
MAT 194

## MAT 121 - Probability and Statistics for the Liberal Arts I

## College of Arts and Sciences

4 credit(s) Every semester
First in a two-course sequence. Teaches probability and statistics by focusing on data and reasoning. Topics include displaying data, numerical measures of data, elementary probability, discrete distributions, normal distributions, confidence intervals. NOTE: A student cannot receive credit for MAT 121 after completing STT 101 or any MAT course numbered above 180 with a grade of $C$ or better.

## MAT 122 - Probability and Statistics for the Liberal Arts II

## College of Arts and Sciences

4 credit(s) Every semester
Second in a two-course sequence. Teaches probability and statistics focusing on data and reasoning. Topics include hypothesis testing, linear correlation, linear regression, nonparametric methods, statistical process control, solving liner equations, matrices, Markov chains. NOTE: A student cannot receive credit for MAT 122 after completing any MAT course numbered above 180 with a grade of $C$ or better.
PREREQ: MAT 121

## MAT 183 - Elements of Modern

## Mathematics

College of Arts and Sciences
4 credit(s) Every semester
Linear equations, matrices, and linear programming. Introduction to mathematics of finance. Discrete probability theory. For students interested in management, finance, economics, or related areas.

## MAT 193 - Algebra-Infused Precalculus

## College of Arts and Sciences

4 credit(s) Irregularly
Polynomial, rational, exponential, and logarithmic functions. Analytical trigonometry and trigonometric functions. Emphasis on algebra throughout the course. A student cannot receive credit for MAT 193 after receiving a grade of C or better in any calculus course. Credit cannot be given for both MAT 193 and MAT 194.

## MAT 194 - Precalculus

## College of Arts and Sciences

4 credit(s) Every semester
Polynomial, rational, exponential, and logarithmic functions. Analytical trigonometry and trigonometric functions. A student cannot receive credit for MAT 194 after receiving a grade of C or better in any calculus course. Credit cannot be given for both MAT 193 and MAT 194.

## MAT 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MAT 221 - Elementary Probability and Statistics I

## College of Arts and Sciences

3 credit(s) Every semester
First of a two-course sequence. For students in fields that emphasize quantitative methods. Probability, design of experiments, sampling theory, introduction of computers for data management, evaluation of models, and estimation of parameters.

## MAT 222 - Elementary Probability and Statistics II

## College of Arts and Sciences

3 credit(s) Every semester
Continuation of MAT 221. Further methods of statistical analysis emphasizing statistical reasoning and data analysis using statistical software. Basic concepts of hypothesis testing, estimation and confidence intervals, $t$-tests and chi-square tests, linear regression, analysis of
variance.
PREREQ: MAT 221

## MAT 284 - Business Calculus

## College of Arts and Sciences

4 credit(s) Every semester
One-variable differential and integral calculus. Applications to business and economics. MAT 284 may not be taken for credit after successful completion of MAT 285 or MAT 295.

## MAT 285 - Life Sciences Calculus I

## College of Arts and Sciences

3 credit(s) Every semester
Functions and their graphs, derivatives and their applications, differentiation techniques, the exponential and logarithm functions, multivariable differential calculus including constrained optimization. MAT 285 may not be taken for credit after successful completion of MAT 284 or MAT 295

## MAT 286 - Life Sciences Calculus II

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Antidifferentiation; the definite integral and applications; first order differential equations with applications. Cannot be taken for credit after successfully completing MAT 296.
PREREQ: MAT 285

## MAT 290 - Independent Study <br> College of Arts and Sciences

1-6 credit(s) Irregularly
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## MAT 295 - Calculus I

College of Arts and Sciences
4 credit(s) Every semester
Analytic geometry, limits, derivatives, maximaminima, related rates, graphs, differentials, exponential and logarithmic functions, mean-value theorem, L'Hospital's rule, integration. For science majors. MAT 295 may not be taken for credit after successful completion of MAT 286.

## MAT 296 - Calculus II

## College of Arts and Sciences

2-4 credit(s) Every semester Integration: the definite integral and applications; trigonometric functions, methods of integration, improper integrals, infinite series, elementary differential equations, parametric equations, polar coordinates.
PREREQ: MAT 295 WITH MINIMUM GRADE C-

## MAT 331 - First Course in Linear Algebra

## College of Arts and Sciences

3 credit(s) Every semester
Linear equations, n-dimensional euclidean space, linear independence, bases, linear transformations, matrices and determinants, eigenvalues and eigenvectors. Geometric aspects. Credit will not be given for both MAT 331 and 485.

PREREQ: MAT 286 OR MAT 296

## MAT 375 - Introduction to Abstract Mathematics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Principles of symbolic logic, set theory, basic function theory, relations, and cardinality. Emphasis on developing proof-writing skills, including mathematical induction. Credit cannot be given for both MAT 375 and CIS 275.
PREREQ: MAT 295

## MAT 397 - Calculus III

## College of Arts and Sciences

4 credit(s) Every semester
Analytic geometry and vectors; functions of more than one variable, multiple integrals, partial differentiation, physical applications.
PREREQ: MAT 296 WITH MINIMUM GRADE C-

## MAT 412 - Introduction to Real Analysis I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Introduction to the foundations of calculus covering topics from the following: the real number system, functions, limits, sequences, infinite series, continuity, and uniform continuity. Enrollment limited to mathematics majors. PREREQ: (MAT 375 OR CIS 375) AND MAT 397

## MAT 414 - Introduction to Ordinary Differential Equations

## College of Arts and Sciences

3 credit(s) Every semester
First order differential equations. Second order linear differential equations. Power series solutions. Bessel's equations, Laplace transforms. Systems of first order differential equations. Applications. Credit will not be given for both MAT 414 and MAT 485.
PREREQ: MAT 397 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 421 - Applied Probability and Statistics

College of Arts and Sciences
3 credit(s) Every semester

Sample spaces, counting, random variables and their distributions, expected value, central limit theorem. Estimation and confidence intervals, hypothesis tests, analysis of variance and regression. MAT 421 does not count towards the Mathematics or Applied Mathematics major or minor. Cannot be taken for credit after successfully completing MAT 521.
PREREQ: MAT 286 OR MAT 296

## MAT 485 - Differential Equations and Matrix Algebra for Engineers

## College of Arts and Sciences

3 credit(s) Every semester
Solution of ordinary differential equations, including series methods. Vector spaces, matrix algebra, rank, linear systems, eigenvalues and eigenvectors. Credit not given for both MAT 485 and MAT 414, nor for both MAT 331 and 485. Does not count toward mathematics major. PREREQ: MAT 397

## MAT 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Irregularly
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## MAT 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## MAT 511 - Advanced Calculus

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Partial derivatives, implicit functions, integration in several variables, line and surface integrals.
PREREQ: (MAT 331 AND MAT 397) OR GRADUATE
STANDING IN MATHEMATICAL SCIENCES

## MAT 512 - Introduction to Real Analysis II

## College of Arts and Sciences

3 credit(s) Every semester
Real-number system, set theory and elementary topological properties of the real line, continuity and differentiability, sequences and series, uniform convergence, Riemann integration, and improper integrals.
PREREQ: MAT 412 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 513 - Introduction to Complex Analysis

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Complex number system and its arithmetic, geometric representation. Linear transformations. Analytic functions and the Cauchy-Riemann equations. Integration and Cauchy's theorem, Taylor and Laurent series, singularities, poles, and residues. Applications. PREREQ: MAT 412 OR MAT 511 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 517 - Partial Differential Equations and Fourier Series

College of Arts and Sciences
3 credit(s) Every semester
Partial differential equations, boundary-value problems, Fourier series and orthogonal expansions, Bessel functions, and Legendre polynomials.
PREREQ: MAT 485 OR MAT 414 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 518 - Fourier Series, Transforms and Wavelets <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Orthogonal functions, Fourier series, Fourier transforms-continuous and discrete, Haar wavelets and multiresolution analysis, applications to signal processing. <br> PREREQ: MAT 414 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 521 - Introduction to Probability

## College of Arts and Sciences

3 credit(s) Every semester
Algebra of sets. Probability in finite sample spaces. Binomial and multinomial coefficients. Random variables. Expected value and standard deviation. Density functions. Statistical applications.
PREREQ: MAT 397 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 525 - Mathematical Statistics

## College of Arts and Sciences

3 credit(s) Every semester
Estimation and confidence intervals. Normal distribution and central limit theorem. Testing hypotheses, chi-square, t , and F distributions. Least squares, regression, and correlation. PREREQ: MAT 521 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 526 - Introduction to Stochastic Processes

## College of Arts and Sciences

3 credit(s) Every semester
Discrete time Markov chains, Poisson process, continuous time Markov chains and other selected stochastic processes.
PREREQ: MAT 521 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 531 - Second Course in Linear Algebra

College of Arts and Sciences
3 credit(s) Every semester
Abstract vector spaces and inner product spaces, linear transformations and linear operators, eigenvalues and diagonalization. Primarily for mathematics majors.
PREREQ: ((MAT 375 OR CIS 375) AND MAT 331)
OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 532 - Applied Linear Algebra

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Factorization of matrices, eigenvalues and eigenvectors, orthogonality. Applications of matrices to such topics as least-squares approximation, fast Fourier transform, difference and differential equations, linear programming, networks, game theory.
PREREQ: MAT 331 OR MAT 485 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 534 - Introduction to Abstract

 Algebra
## College of Arts and Sciences

3 credit(s) Every semester
Theory of groups, rings, and fields, including the integers and polynomail rings.
PREREQ: MAT 531 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 541 - Introduction to Number Theory

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Prime numbers, greatest common divisors, congruences. Euler's function, Fermat's theorem, primitive roots, indices, quadratic residues, Legendre and Jacobi symbols, and the quadratic reciprocity law.
PREREQ: ((MAT 375 OR CIS 375) AND MAT 331)
OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 545 - Introduction to Combinatorics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: CIS 545
Permutations, combinations, recurrence relations, generating functions, inclusion-exclusion and applications, introductory graph theory. PREREQ: MAT 375 OR CIS 375 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 551 - Fundamental Concepts of Geometry

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Synthetic projective geometries. Coordinate systems for projective spaces. Algebraic representation of projective transformations; euclidean, non-euclidean, and affine geometries as real cases of projective geometry. PREREQ: ((MAT 375 OR CIS 375) AND MAT 331) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 554 - Differential Geometry

## College of Arts and Sciences

3 credit(s) Irregularly
Theory of curves in three-dimensional space, including Frenet's formula, Gaussian and mean curvature, geodesics, developable surfaces, special conformal mappings.
PREREQ: MAT 412 OR MAT 511 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 562 - Elementary Topology

## College of Arts and Sciences

3 credit(s) Irregularly
Metrics and metric spaces, topologies and topological spaces, separation properties, compactness, connectedness, and continuity. PREREQ: ((MAT 375 OR CIS 275) AND MAT 412) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 581 - Numerical Methods with Programming

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Approximation methods for solution of nonlinear equations. Interpolation problems. Numerical integration. Solution of ordinary differential equations. Error analysis and writing computer programs. Primarily for mathematics and engineering students.
PREREQ: MAT 397 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 593 - History of Mathematics
College of Arts and Sciences
3 credit(s) Irregularly

Mathematical concepts in their historical perspective. Character and contributions of the great mathematicians and relation of mathematics to other sciences.
PREREQ: (MAT 397 AND AT LEAST TWO 500-LEVEL MATH COURSES) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

## MAT 599 - Senior Seminar in Mathematics

College of Arts and Sciences
3 credit(s) Irregularly
Topic Chosen by the instructor. Permission of department.

## Maxwell

## MAX 123 - Critical Issues for the

 United States.College of Arts and Sciences
3 credit(s) Every semester Interdisciplinary focus on critical issues facing America. Perspectives of social science disciplines on the meaning of the American Dream, its past and its future.

## MAX 132 - Global Community

## College of Arts and Sciences

3 credit(s) Every semester Dynamics of worldwide society and its cultures. Global economy and political order. Tensions within these realms. Attempts by different communities to either participate in or to hold themselves aloof from "global culture."

## MAX 201-Quantitative Methods for the Social Sciences

## College of Arts and Sciences

3 credit(s) Every semester Skills necessary to analyze data and evaluate research: research design, sampling design, descriptive and inferential statistics, data sources for social science, constructing data sets, reading and constructing tables and charts.

## MAX 301 - Ethics, Justice, and Citizenship

## College of Arts and Sciences

4 credit(s) Every semester
Seminar in ethics and political/social justice as they pertain to citizenship and civic action. Course covers historical and contemporary approaches to citizenship; contains substantial research and service-learning components.

## MAX 302 - Civic Engagement Research Seminar

College of Arts and Sciences
3 credit(s) Every semester

Readings and research on application of social science methodologies to concrete civic, political, and global issues. Initial focus on Maxwell-based research; case studies of academically informed civic engagement; final project proposal on topic of student's choice.
PREREQ: MAX 301

## MAX 401 - Civic Engagement Action Plan Workshop

## College of Arts and Sciences

3 credit(s) Every semester
Capstone course for Maxwell Citizenship/Civic Engagement Program. Design and implementation of 'Action Plan' to improve social, economic and/ or political conditions at the local, state, federal or global level.
PREREQ: MAX 302

## MAX 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## Middle Eastern Studies

## MES 165 - Discovering Islam

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 165, SAS 165
Islam as a faith and a civilization. Understanding its origins, beliefs, rituals, and the historical development of its intellectual traditions in the pre-modern and modern eras, and its geographic, cultural and theological diversity today.

## MES 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MES 308 - Ancient Judaism and the Origins of Christianity

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: JSP 308, REL 308
Offered only in Madrid. Social, cultural, intellectual, and historical conditions which surrounded the birth of this new world religion in its ancient Mediterranean cradle--from Mesopotamia and Egypt to Greece and ancient Rome.

## MES 315 - Arab American Literature and Culture

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
This course is designed to familiarize students with the burgeoning field of contemporary ArabAmerican literature, highlighting the ways in which this literature portrays and complicates ArabAmerican identities and cultures.

MES $\mathbf{3 1 8}$ - The Middle East to 1900

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 318
Beginning with the rise and spread of Islam through the reform era of the nineteenth-century, this course focuses on the social and cultural history of the Ottoman Empire.

## MES 319 - The Middle East in the 20th

 Century
## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 319
Social and cultural history of the Middle East in the twentieth-century, including themes such as colonialism, anti-colonial nationalism, modernity, social movements, women and gender, and contemporary issues.

## MES 321 - Christians, Jews and Muslims

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HUM 321, JSP 321, REL 321
Offered only in Madrid. Key historic encounters between the three versions of monotheism, with reference to the richness of past cultural and religious legacy rooted in the Mediterranean region.

## MES 335 - Israeli Literature and Culture

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: JSP 335, LIT 335, REL 335
Literary and cultural approach to the modern
history of Israel, with special attention to conflicts
that have arisen during the Zionist project.

## MES 336 - Arabic Cultures

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ARB 336 , LIT 336
Arabic culture through geography, literature, religion (Islam and other religions), ethnic groups, social divisions, films, the media, music, art, food, gender issues, and everyday life.

MES 342 - Religion and Politics in the Israeli-Palestinian Conflict

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 342, PSC 342, REL 342
Considers the extent to which religion matters in an enduring ethno-nationalist conflict.
Approaches the Israeli-Palestinian conflict from an interdisciplinary perspective that explores the intersection of religion and politics.

## MES 344 - Politics of the Middle East

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: PSC 344
Religious, political, economic, and social dimensions of life in modern Middle East. Legacy of Islam, encounter with Western modernity, Arab-Israeli conflict, and political economy of the region.

## MES 345 - Islam and Politics in Asia

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: PSC 345
Survey of the diverse and protean role Islam plays in Asian public life by analyzing the variegated cultural, political, religious, and social milieu that it has encountered in Central, South, and Southeast Asia.

## MES 349 - Politics of Iran

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 349
Historical and theoretical understanding of modern Iranian politics and society from the late 19th century to the present time.

MES 350 - Gender, Violence, and
Sexualities in the "War on Terror"

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
This course analyzes the ways in which gender has been employed in developing narratives of US national security and the War on Terror after 9/11.

## MES $\mathbf{3 6 0}$ - Reading Gender and Sexualities: Gender and Sexuality in the Arab World

## College of Arts and Sciences

3 credit(s) Every semester
This course explores the ways in which gender and sexuality are represented in an array of visual, historical, and literary texts from the Arab world and its diaspora, starting from the pre-Islamic era up till the contemporary period.

## MES 364 - Enchanting Words: Muslim Poets, Singers and Storytellers

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 364, SAS 364
Understand the power of words and language in Muslim cultures expressed in oral and literary genres including poetry, humor, fables, folksongs and travel journals. Explore key themes such as virtue, reality, divine and human nature.

## MES 365-God and Beauty in Islamic Art

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 367, SAS 367
Expressions of beauty, creativity and faith in Islamic calligraphy, ceramics, textiles, architecture, miniatures and music. Unity and diversity of the visual and performing arts of Muslims in different periods, cultures and regions.

## MES 366 - Representations of the Middle East

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 366
The politics of "gazing" and cultural imagination through critical analysis of how the mass media articulates, transmits, promotes and legitimizes knowledge and information about the Middle East.

## MES 367-Oil, Water and War

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 367
Examines current level of knowledge about historical connections among war and the resources of petroleum and fresh water. Also looks at how alternative claims about these goods will be expressed in the future.

## MES 368 - Islam and the West

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HST 368, PSC 368
Topics include globalization and interdependency of faiths, the "clash of civilizations", relations between religion and state in Islam and Christianity and whether it is possible to separate the world into monolithic entities "Islam" and
"West". Offered in London only.

## MES 382 - Health in the Middle East

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 382, HTW 382
Surveys major cultural, biological and environmental features of the Middle East and relates them to aspects of health including
infectious disease, chronic disease, reproductive health, population, war, poverty and globalization.

## MES 386 - Sounds of the Silk Road

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HOM 386, SAS 386
The soundscapes of the overland Silk Road as a window into history, commerce, migration, social life, values, faith, tolerance and conflict. Case studies from Turkish, Arabic, Persian, Central Asia, and Southwest Asia musics.

## MES 391 - Revolutions in the Middle

 EastCollege of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: PSC 391
A comparative study of revolutions in the Middle East in terms of causes, processes and outcomes.

## MES 392 - Islamism and Islamist Movements Today

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 392, REL 362
A study of the historical, religious, social and political origins of Islamism and Islamist movements around the world today.

## MES 393 - Middle Eastern Political Systems

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 393
Study of Middle Eastern political systems in terms of cleavages and crisis.

MES 394 - History of Islamic Political Thought

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 394
A study of Islamic political and social attitudes pertaining to contemporary issues.

MES 395 - Democratization in the Muslim World

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 395
Reasons for and dynamics of democratization in some Muslim countries.

## MES 404 - 'AZAHAR' The Islamic Conquest and the Christian Reconquest

College of Arts and Sciences
2 credit(s) Every semester

Crosslisted with: FLL 404, HUM 404 Thirteen day interdisciplinary seminar. Lectures in situ. Artistic, historical, cultural monuments of Cordoba, Sevilla, Granada and Toledo or Salamanca. Theological, philosophical and historical thought as to recreate the artistic and cultural climate of medieval al-Andalus/Spain.

## MES 406 - The Middle East in Graphic Novels

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Graphic narratives that handle complex issues defining life in the Middle East and its diaspora, including wars and military conflicts, coming-ofage struggles, and gender relations.

## MES 430 - Senior Seminar in Middle Eastern Studies

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
A required course for students pursuing a minor or major in Middle Eastern Studies. An interdisciplinary study of special topics that fall under the rubric of Middle Eastern Studies: Western modernity, Islamic thought and practices, and popular culture.
PREREQ: MES 344
Repeatable 1 time(s), 6 credits maximum
MES 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Crosslisted with: QSX 453, WGS 453
Focuses on the centrality of gender and sexuality to the politics of everyday life by mapping women's rights movements, LGBT Mobilizations, and minority activisms in the Middle East.

## MES 465 - Beyond the Veil: Gender Politics in Islam

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring Crosslisted with: REL 465, SAS 465, WGS 465
Double Numbered with: MES 626
Politics of gender, religious identities, and resistance in the Islamic world. Gender scripts in Qur'anic scripture and Shariah laws. Contemporary realities of Muslim women living in different parts of the world. Additional work required of graduate students.

MES 468 - Middle East in Anthropological Perspective<br>College of Arts and Sciences<br>3 credit(s) Irregularly<br>Crosslisted with: ANT 468, IRP 468<br>Double Numbered with: MES 668

Anthropology of the social, cultural, geographical, and political realities of the Middle East. Additional work required of graduate students.

## MES 495 - Distinction Thesis in Middle East Studies <br> College of Arts and Sciences <br> 3 credit(s) Upon sufficient interest Thesis in partial fulfillment of the requirements for the Distinction in Middle Eastern Studies Program. Normally in the semester prior to graduation, topic chosen in conjunction with advisor.

## MES 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable

## Native American Studies

## NAT 105 - Introduction to Native American Studies

## College of Arts and Sciences

3 credit(s) Every semester
Overview of critical issues in Native American Studies: colonization, religious freedom, environment, sovereignty, and politics of identity, interdisciplinary, comparative, and indigenous perspectives in relation to histories, societies, and cultures.

## NAT 142 - Native American Religion

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 142
Religious beliefs and practices of native Americans; the diversity as well as similarity of religious expression.

## NAT 200 - Selected Topics in Native American Studies

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NAT 208 - Haudenosaunee Languages and Culture

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Languages and culture of the six Haudenosaunee Indian nations. Terminology and structure of Haudenosaunee languages. Creation story, Great Law of Peace, Code of Handsome Lake.

## NAT 244 - Indigenous Religions

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: ANT 273, REL 244
The connections between material life and religious life in cultures throughout the world. The diverse ways that various cultures inhabit their landscapes.

## NAT 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## NAT 300 - Selected Topics in Native American Studies

College of Arts and Sciences
1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NAT 301 - Iroquois Verb Morphology I

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
This course will analyze the Iroquois verb. The students will be introduced to the morphological structure common to all Iroquois languages.

## NAT 302 - Iroquois Verb Morphology II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
This course will analyze the Iroquois verb. The students will be introduced to the morphological structure common to all Iroquois languages. This is the second course in a two part series.
PREREQ: NAT 301

## NAT 305 - Iroquois Phonetics and Phonology

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Explores the sounds and sound systems of the Iroquois Languages (Onondaga, Mohawk, Seneca, Cayuga, Oneida, Tuscarora.) How sounds systems are related to writing systems.

## NAT 306 - Iroquois Syntax and

 Semantics
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
A study of semantic distinctions and syntactic structures in Iroquois Languages.
PREREQ: NAT 305

## NAT 308 - Iroquois Linguistics in Practice

## College of Arts and Sciences

$3-6$ credit(s) At least $1 x$ fall or spring This course will guide the student through the practical application of phonetics, phonology, semantics, morphology and syntax to their Iroquois language learning and teaching experience.
PREREQ: NAT 301 AND NAT 302 AND NAT 305 AND NAT 306

## NAT 323 - Peoples and Cultures of North America

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ANT 323
Racial, linguistic, and cultural areas of North America from the Rio Grande to the Arctic. Selected areas and tribes. Data from archaeology, historical records, and contemporary anthropological fieldwork.

## NAT 346 - Native North American Art

College of Arts and Sciences
3 credit(s)
Crosslisted with: HOA 387
Critical exploration of meanings, functions, techniques, and varieties of art in Native North American cultures, ancient to present. Attention to continuities, changes, and cultural exchanges; anthropological vs. art historical perspectives: limitations of term "art."

## NAT 347 - Religion and the Conquest of America

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: REL 347
The development of America through the contact between indigenous and colonial people's divergent religious understandings of land.

## NAT 348 - Religion and American Consumerism

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: REL 348
Interrogates the relationship of American religious and economic practices, as compared with Native American traditions, during the 19th and 20th centuries.

## NAT 372 - Race in Latin America

College of Arts and Sciences
3 credit(s)
Crosslisted with: HST 372, LAS 372
Race relations in Latin America from the late colonial era to present. Indigenous, immigrant,
and Afro-Latin American experiences and how they have changed over time. Relations of race to national identity.

## NAT 400 - Selected Topics in Native American Studies

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NAT 438 - Native American Health Promotion

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HTW 438
Double Numbered with: NAT 638
Examines Native American culture and its contribution to wellness, including indigenous foodways, fitness and indigenous knowledge as an adjunct to chemical dependency treatment. Includes the historical roots of trauma as social determinants of health disparities. Additional work required of graduate students.

NAT 441 - Federal Indian Policy and Native American Identity<br>\section*{College of Arts and Sciences}<br>3 credit(s) Irregularly<br>Crosslisted with: SOC 441<br>Shifts in Federal Indian policy and the social construction of American Indian identity. Identity struggles and identity politics in relation to blood and descent, community, land and sovereignty.

## NAT 444 - Contemporary Native American Movements

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 444
Sociological analysis of Native American movements from 1960s to the present. National and regional movements in relation to jurisdictional issues and human rights. Red Power and pan-Indian movements are considered.

## NAT 445 - Public Policy and Archaeology

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 445
Double Numbered with: NAT 645
Proactive critique of public policy and implementation efforts to preserve and protect archaeological and historical sites and resources. Additional work required of graduate students.

## NAT 447 - Archaeology of North America

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ANT 447
Double Numbered with: NAT 647
Introduction to the regional prehistory of North America north of Mexico, from the late Pleistocene until European contact. Adaptation of prehistoric human populations to their ecosystems. Additional work required of graduate students. PREREQ: ANT 141 OR ANT 145

## NAT 456 - Representations of Indigenous Peoples in Popular Culture

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ANT 456
Double Numbered with: NAT 656
Contested images used by colonizers and other non-indigenous people to represent Native Americans and other indigenous peoples. How indigenous people represent themselves in a variety of media. Additional work required of graduate students.

## NAT 459 - Contemporary Native North American Issues

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 459
Double Numbered with: NAT 659
Contemporary issues including federal Indian policy, population controls, fishing rights, religious freedom, land disputes, gaming, repatriation, environmental colonialism, and Native American artistic response. Additional work required of graduate students.

## NAT 461 - Museums and Native Americans

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 461
Double Numbered with: NAT 661
The contested relationships among Native North Americans and museums from earliest contact until the present. Topics include: "salvage" ethnography, collecting practices, exhibition, and recent shifts in power. Additional work required of graduate students.

## NAT 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## Neuroscience

## NEU 211 - Introduction to Neuroscience

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: BIO 211
Foundations of neurobiology beginning with cellular neurobiology, moving on to integrative systems and ending with higher brain functions. Emphasizes understanding of nervous system operation. Lectures, discussion and demonstrations.

## NEU 301 - Introduction to Cognitive

 Science
## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: COG 301
Concepts and methods in the study and explanation of cognition. Knowledge that underlies such abilities as vision, language use, and problem solving. How it is represented and used. Comparison of methods in different disciplines studying cognition.

## NEU 407 - Advanced Neuroscience

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: BIO 407
Detailed analysis of the anatomy, physiology, and chemistry of the nervous system and behaviors that it mediates. Topics include: neurons and electrochemical properties of neurons, sensory and motor systems, homeostasis, sleep, consciousness, learning, and memory. Additional work required of graduate students.

## NEU 409-Cognitive Neuroscience of Speech and Language

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: CSD 409
Neuroanatomical and neurophysiological aspects of speech and language. Role of central and peripheral nervous system in normal speech and language activities.Additional work required of graduate students.

## Public Affairs and Citizenship

## PAF 101 - An Introduction to the Analysis of Public Policy <br> College of Arts and Sciences

3 credit(s) Every semester Develop research and problem solving skills to create government policies that address current social and economic problems facing the United States. Students study policy problems of their
choice.

## PAF 110 - Public Service Practicum

## College of Arts and Sciences

1 credit(s) Every semester
Students investigate the societal issues affecting members of the Syracuse community by completing a 35 hour community service requirement, attending 4 class meetings to reflect on their experiences, and completing weekly journals and two paper assignments. Repeatable

## PAF 121 - Leadership Practicum

## College of Arts and Sciences

1 credit(s) Every semester A six-week practical leadership development class that explores current leadership models.

## PAF 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PAF 275 - National Security

 Organization
## College of Arts and Sciences

0-1 credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 205
Organization and administration of the U.S. national security forces, including strategic offensive, general purpose, and support-force components of the Department of Defense budget.

## PAF 276 - National Security Organization/Aerospace Forces

## College of Arts and Sciences

0-1 credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 206
Organization and administration of the U.S. aerospace forces, including strategic defensive, general purpose, and support-force components of the Department of Defense budget.

PAF 315 - Methods of Public Policy Analysis and Presentation<br>College of Arts and Sciences<br>3 credit(s) Every semester Opportunity to develop competencies in the application of social science methods to public policy problems.<br>PREREQ: PAF 101

## PAF 351 - Global Social Problems

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Topics include war, inequality, population, scarcity, environment, and technology.

## PAF 400 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Every semester Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PAF 409 - Intermediate Analysis of Public Policy

College of Arts and Sciences
3 credit(s) Every semester
Current public policy problems (e.g., energy, health care, transportation, the Equal Rights Amendment, the draft) using a variety of research techniques.
PREREQ: PAF 101 WITH MINIMUM GRADE A

## PAF 410 - Practicum in Public Policy

College of Arts and Sciences
3 credit(s) Every semester
Students develop skills and gain knowledge about organizations that influence and implement public policy. Students are placed in community agencies for about 100 hours of work or work in applied research projects conducted by faculty. Repeatable

## PAF 416 - Community Problem Solving

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Historical problems of Syracuse. Volunteerism, community organization, and local socioeconomic conditions. Student teams work with youths from Syracuse community centers to solve local problems.
PREREQ: PAF 101

## PAF 420 - Interpersonal Conflict Resolution Skills

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Enhanced communication skills to interact more effectively and solve problems creatively. Emphasizing reflective listening, problem solving, assertion, and managing conflicts among needs and values. Presenting theories demonstrating skill, practice, and critique. Additional work required of graduate students.
Repeatable

## PAF 421 - Mediation:Theory and Practice

## College of Arts and Sciences

3 credit(s) Only during the summer Mediation skills to facilitate the resolution of disputes and differences. Techniques of third party intervention with individuals and groups. Learning approach includes lectures, simulations, modeling and practice mediations. Additional work required of graduate students.

## PAF 423 - Leadership: Theory and Practice

## College of Arts and Sciences

3 credit(s) Only during the summer Leadership skills to exercise responsible leadership and effective group membership in various contexts. Focus on individual leadership style and growth. Development of skills for a collaborative model of leadership. Additional work required of graduate students.

## PAF 424 - Conflict Resolution in Groups

## College of Arts and Sciences

3 credit(s) Only during the summer Skills to enhance understanding of conflict and conflict resolution and manage conflict in intragroup and intergroup settings. Unstructured small group experience to learn how groups function and to present a context for practice.

## PAF 431 - Criminal Justice System

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Seminar exploring the structure and function of the criminal justice system, as well as current issues, through readings, case analysis, court observation, and guest speakers.
PREREQ: PAF 101

## PAF 451 - Environmental Policy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Study of interaction among government, environmental lobbyists, industry, scientists, and news media in formation of environmental policies.

## PAF 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## PAF 475 - National Security Forces in Public Policy <br> College of Arts and Sciences

$0-3$ credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 405
Broad range of American civil-military relations and environmental context in which defense policy is formulated.

## PAF 476 - National Security Forces in Contemporary American Society

## College of Arts and Sciences

$0-3$ credit(s) At least $1 x$ fall or spring
Crosslisted with: ASC 406
Impact of both technological and international developments upon strategic preparedness, military strategy, and the overall defense policymaking process.

## PAF 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## PAF 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Philosophy

## PHI 107-Theories of Knowledge and Reality

## College of Arts and Sciences

3 credit(s) Every semester
An introduction to some major questions about knowledge and reality, such as the existence of God, the mind-body problem, free will and the nature and limits of knowledge. Historical and contemporary readings.

## PHI 109 - Introduction to Philosophy (Honors)

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Fundamental philosophical problems. Works of major philosophers. Open to first-year students in the Honors Program. Credit will not be given for both PHI 109 and PHI 107.

## PHI 111 - Plato's Republic

## College of Arts and Sciences

3 credit(s) Irregularly
Plato's thought as developed in the Republic. May include other Platonic dialogues. Recommended for first-year students and sophomores.

## PHI 125 - Political Theory

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PSC 125
Introduction to theories of major modern political philosophers (Locke, Rousseau, Hume, J.S. Mill, Marx). Contemporary theories of liberty, justice, and equality.

## PHI 171 - Critical Thinking

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Presentation and evaluation of reasoning, including arguments, explanations, and the justification of decisions. Topics of current social and ethical interest will serve as examples, with one topic selected for extended study.

## PHI 172 - Making Decisions

## College of Arts and Sciences

3 credit(s) Irregularly
An introductory exploration of decision making:
"What is the difference between decisions made well and decisions made badly?" Selected readings from various disciplines.

## PHI 175 - Introduction to Social and Political Philosophy

## College of Arts and Sciences

3 credit(s) Every semester
Classical and contemporary readings on basic topics in social and political philosophy; political obligation and authority, justice and basic rights, liberty and equality, the justification of democracy.

## PHI 191 - Ethics and Contemporary Issues

## College of Arts and Sciences

3 credit(s) Every semester
Ethical reflection on some basic moral quandaries of daily life. Ideas of Plato, Aristotle, Kant applied to topics such as self-respect and decency in a technological world, abortion, honesty, friendship, moral courage, self-respect.

## PHI 192 - Introduction to Moral Theory

## College of Arts and Sciences

3 credit(s) Every semester Major philosophical theories about moral rightness, virtue, and the good life, such as utilitarian, Kantian, and Aristotelian theories. Historical and contemporary sources. Credit
cannot be received for both PHI 192 and PHI 209.

## PHI 197 - Human Nature

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Philosophical theories of human nature, their underlying metaphysical claims, and their ethical consequences.

## PHI 200-Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHI 209 - Introduction to Moral

 Philosophy (Honors)College of Arts and Sciences
3 credit(s) At least 1x fall or spring Selected topics in moral philosophy. Credit willnot be given for both PHI 209 and 192.

## PHI 241 - The Human and Divine in Christian and Muslim Philosophy

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 292
An investigation of the complex relationship between humanity and divinity and its implication for the formation of Christian and Islamic philosophy and theology.

## PHI 251 - Logic

College of Arts and Sciences
3 credit(s) Every semester
Logic as a formal language, as a component of natural language, and as a basis of a programming language. Varieties of logical systems and techniques. Syntax, semantics and pragmatics.

## PHI 293 - Ethics and the Media Professions <br> College of Arts and Sciences

3 credit(s) Every semester
Great traditions in ethical theory; application to television, film, new media. Role of ethics in program and content development; and in business practices. Ethical issues arising from social networking, globalization, and new trends in the media. Priority given to Newhouse students.

## PHI 296 - Friendship <br> College of Arts and Sciences

3 credit(s) Irregularly
Reflections on the nature, varieties, rewards, and hazards of friendship. Contrast and comparison
with romantic and/or sexual relationships. The role of character, trust, and mutual respect in friendship.

## PHI 297 - Philosophy of Feminism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 297
Philosophical analysis of feminist theory. Feminist theories about human nature, gender, relations among gender, race and class, and causes of and remedy for women's subordinate status.

## PHI 307 - Ancient Philosophy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Development of Western philosophy from the Presocratic Greek philosophers to the Hellenistic period. Major figures such as Parmenides, Zeno, Socrates, Plato and Aristotle.

## PHI 308 - Classical Islamic Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
God, causality, freedom, human nature and knowledge , the good life and the ideal state in classical Islamic philosophy. To include authors such as Al-Kind, Al-R'z', Al-F'r'b', Ibn S'n' (Avicenna), Al-Ghaz'l', Ibn Tufayl and Ibn Rushd (Averroes).
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 311 - The Rationalists

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Theories of mind, matter, God and freedom put forth by rationalist philosophers such as Descartes, Spinoza, Malebranche, and Leibniz.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 313 - British Philosophy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Major philosophical writings of the British empiricists, including Locke, Berkeley, and Hume, with a focus on their theories of knowledge, mind, and matter.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

PHI 317 - Political Philosophy: The Social Contract Tradition and its Critics

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 373
Political obligation in the writings of the three major social contract theorists, Hobbes, Locke, and Rousseau. Additional reading from their critics
such as Burke, Mill, and Marx.

## PHI 319 - God in Political Theory

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: PSC 399, REL 371
An exploration of the key approaches to the relationship between the idea of God and religion and politics in political theory and philosophy.

## PHI 321 - Twentieth Century Theories of Knowledge, Reality, and Meaning

## College of Arts and Sciences

3 credit(s) Irregularly
Major 20th-century movements in philosophy.
PREREQ: PHI 107 OR PHI 109 OR JUNIOR OR SENIOR STANDING

## PHI 325 - Existentialism

College of Arts and Sciences
3 credit(s) Irregularly
Study of existentialism through the works of Kierkegaard, Nietzsche, Sartre, and others. May include relevant fiction from Gide, Sartre, Camus, Beauvoir, and others.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 341 - Philosophy of Religion

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring Relationship of faith and reason. Nature and existence of God. Nature of humans and of human destiny.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 342-Sources of the Self: Finding the "I" in Religion \& Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: REL 394
An exploration of major conceptions of the self, personal identity and human nature in philosophical and religious traditions.

## PHI 343 - Philosophy of Education

## College of Arts and Sciences

3 credit(s) Irregularly
Application of philosophical methodology and various positions in epistemology, metaphysics, and value theory to conceptual issues in education. Goals and appropriate means of education.

## PHI 351 - Logic and Language

## College of Arts and Sciences

3 credit(s) Irregularly
Logic as a formal language, as a component
of natural language, and as a basis of a programming language. Varieties of logical systems and techniques. Syntax, semantics and pragmatics.
PREREQ: PHI 251

## PHI 354 - Kierkegaard and Nietzsche

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 354
This course focuses on the similarities and differences of Kierkegaard's and Nietzsche's views on selfhood, society, and religion.

## PHI 363 - Ethics and International

## Relations

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PSC 363
The role of ethical concerns, imperatives, and restraints in international relations. Includes realism, just war theory, the ethics of nuclear deterrence, and other topics at the discretion of the instructor.

## PHI 373 - Introduction to the Philosophy of Science

College of Arts and Sciences
3 credit(s) Irregularly
Central concepts in the analysis of science, such as law, explanation, theory, and confirmation. Controversies surrounding the nature of theoretical entities and the character of scientific change. PREREQ: ANY PHI COURSE OR JUNIOR OR SENIOR STANDING

## PHI 375 - Philosophy of Biology:What Can Evolution Explain?

College of Arts and Sciences
3 credit(s) Irregularly
Examination of the structure, scope, and relevance of evolutionary explanations and introduces the basic concepts of philosophy of biology. PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 376 - Philosophy of Mind <br> College of Arts and Sciences

3 credit(s) Irregularly
Central issues and approaches in classical and/or contemporary philosophy of mind, such as the mind-body problem, mental causation, consciousness, intentionality, dualism, behaviorism, functionalism, eliminativism. PREREQ: ONE CLASS IN PHI OR SOPHOMORE OR GREATER STANDING

PHI 377 - Philosophy of Psychology<br>College of Arts and Sciences<br>3 credit(s) Irregularly

Conceptual and methodological issues. Such topics as innate knowledge, intentionality, rationality, intelligence, computer model of mind, concept of a person, and self-consciousness. PREREQ: ANY PHI COURSE OR JUNIOR OR SENIOR

## PHI 378 - Minds and Machines

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Philosophical issues concerning artificial
intelligence. Can machines understand, learn, think rationally, and be self-conscious? Critique of the computational theory of mind.
PREREQ: ANY PHI COURSE OR JUNIOR OR SENIOR STANDING

## PHI 379 - American Slavery and the Holocaust

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 379, PSC 379
An in-depth study of the normative structure of both American Slavery and the Holocaust, focusing upon the ways in which each institution conceived of its victims and the character of the moral climate that prevailed in each case.

## PHI 381 - Metaphysics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Topics such as personal identity, possibility and necessity, the nature of time and space, freedom and determinism, and the distinction between particulars and universals.
PREREQ: ANY PHI COURSE OR JUNIOR OR SENIOR STANDING

## PHI 383 - Free Will

College of Arts and Sciences
3 credit(s) Irregularly
This course explores the concept of free will, asking: what is it, can we have any, and why should we care?

## PHI 385 - Personal Identity

## College of Arts and Sciences

3 credit(s) Irregularly
An exploration of the metaphysics of personhood.
By virtue of what am I the same person as the child in my baby photos, given that we are so different? What makes me me?

## PHI 387 - Epistemology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Topics such as the nature of knowledge, knowledge of the external world, theories of justification, a priori knowledge, skepticism, and the problem of induction.
PREREQ: ANY PHI COURSE OR JUNIOR OR SENIOR

## STANDING

## PHI 391 - History of Ethics

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Ethical writings of such philosophers as Aristotle, Epictetus, Aurelius, Hume, Butler, Kant, Mill, Sidgwick, Nietzsche, Bradley.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 393 - Contemporary Ethics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Selected problems and trends in recent ethical philosophy. Consideration of such questions as these: What is the nature of moral disagreement? What makes a person's life go well? What makes an action morally right
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 394 - Environmental Ethics

## College of Arts and Sciences

3 credit(s) Irregularly
A survey of several main topics in environmental ethics including animal rights, the ethics of climate change, preservation of endangered species, and obligations to future generations.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 395 - Philosophy of Art

College of Arts and Sciences
3 credit(s) Irregularly
Chief aesthetic theories from Plato to present. Application to literature and the fine arts.

## PHI 396 - Stem Cells and Society

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: BIO 396, REL 359
The science of stem cells and the philosophical, religious and legal complexities surrounding the research and use of stem cell technologies.

## PHI 397 - Philosophy of Law

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 375
Central issues in the philosophy of law such as the nature of law and obligation to obey the law; justification of punishment and of state restrictions on individual liberties; justice and the law.

## PHI 398 - Medical Ethics

College of Arts and Sciences
3 credit(s) Irregularly
Ethical issues in medicine and health policy such
as technically assisted reproduction, physicianassisted suicide, genetic testing, obligations to the frail elderly, neonatal intensive care, and equity in access to health care. Credit cannot be given for both PHI 398 and REL 252.

## PHI 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHI 401 - Seminar for Philosophy Majors

College of Arts and Sciences
3 credit(s) Every semester
Development of skills essential to philosophical research, philosophical writing, and oral presentation. Required of philosophy majors. PREREQ: PHI MAJOR DECLARED

## PHI 406 - Citizenship from Modernity to Globalization

College of Arts and Sciences
3 credit(s)
Crosslisted with: PSC 406
Offered only in Florence. Citizenship as a major crossroads in European political thought: key thinkers; permutations throughout European history; impact of globalization and European unification on concepts of citizenship, liberty, and justice.

## PHI 411 - Philosophies of Race and Identity

## College of Arts and Sciences

3 credit(s) Irregularly
Concepts of race and racial identity, their history, various meanings, and whether they should continue to be used. Political effects of racial identities, racism, integrationism, mixed race identity, and multiculturalism.

## PHI 413 - Identity and Difference

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 413, WGS 413
Interdisciplinary approach to examine concepts of identity and difference, challenges notions of subjectivity, nation and gender. Philosophical, political, and gender-related dimensions explored. Offered only in Florence.

## PHI 415 - Roots of Western Civilization

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Madrid. Course proposes an in-depth treatment of a selection of Greek
and Judaeo-Christian classics and ends with discussion of modern works that bond both traditions.

## PHI 417 - Contemporary Political Philosophy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 382
Contemporary contractualist, rights-based, and communitarian theories of social justice.

## PHI 418 - Hegel, Marx, and Nietzsche

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: PHI 618 Interrelationships and contemporary debate over interpretations of their major works. Topics include: philosophy of history, human nature, dialectics, theory of knowledge, alienation, concepts of self and freedom. Additional work required of graduate students. PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 422 - Twentieth Century French and German Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: PHI 622
Twentieth-century French and German philosophical criticism of the legacy of the Enlightenment and its conceptions of subjectivity and epistemology. Critical theory, hermeneutics, poststructuralism, and psychoanalytically inspired theories. Additional work required of graduate students.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 425 - Post-colonialism and Philosophy

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 425
The philosophical analysis and critique of colonialism's representations of other cultures and justifications for intervention, as well as debates over effective forms of resistance.

## PHI 427 - Enlightenment: Between European West and Islam

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: REL 461
The course examines the common view that Enlightenment and Modernity started in the West, revealing their roots in Islamic thought and philosophy and considers how the two traditions converge and/or diverge.

## PHI 435 - Modern Jewish Thought

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: JSP 435, REL 435
The philosophical implications of Judaism's encounter with modernity. Close readings of selected modern Jewish thinkers. Issues and figures vary.
Repeatable 3 time(s), 9 credits maximum

## PHI 441 - Topics in Feminist Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 441
Feminist approaches to traditional philosophical questions in various areas, including epistemology, ethics, metaphysics, and philosophy of science. Use of philosophical tools and methods on questions regarding the subordination of women.

## PHI 487 - History of Epistemology

## College of Arts and Sciences

3 credit(s) Irregularly
Theories and problems of epistemology through study of their development by such philosophers as Plato, Descartes, Locke, Hume, Kant, Russell, Ayer, Gettier, and Alston.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## PHI 493 - Contemporary Ethical Issues

## College of Arts and Sciences

3 credit(s) Irregularly
Philosophical study of a selection of contemporary ethical issues, such as racism, sexism, inequality, violence, and poverty. PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 494 - Bioethics:Technology/ Science/Human Rights

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Strasbourg. Examines interface of biological science and ethical concern by employing philosophical principles and procedures first to clarify bioethical problems and then to develop attempts at resolving them. Credit given for PHI 494 or PHI 594/REL 552, but not both.

## PHI 495 - Senior Capstone Project for Ethics

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
For Ethics majors. Focused on producing a significant research project in ethics related to primary major. Developing important research skills, presenting work in class and participating with classmates for feedback.
PREREQ: PHI 391 AND PHI 393

## PHI 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## PHI 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Study of a significant philosopher or philosophical movement.
Repeatable

## PHI 510 - Topics in Ancient Philosophy

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Examination of principal works such as Plato's
Sophist or Aristotle's Metaphysics, or of central themes such as weakness of will or knowledge and belief.
Repeatable

## PHI 550 - Selected Topics in Philosophy

College of Arts and Sciences
1-3 credit(s) Irregularly
Study of a significant philosophical problem.
Repeatable
PHI 551 - Mathematical Logic

## College of Arts and Sciences

3 credit(s) Irregularly
Predicate calculus with identity, its relationship to mathematics and to computer theory. Important results concerning independence, consistency, completeness, decidability and computability. PREREQ: PHI 251 OR MAT 275 OR CIS 375

## PHI 552 - Modal Logic

## College of Arts and Sciences

3 credit(s) Irregularly
Systems of modal logic (logic of the terms
"necessary" and "possible"). Formalization and evaluation of modal arguments and basic concepts of metatheory and semantics. Related logics.
PREREQ: PHI 251

## PHI 555 - Philosophy of Mathematics

## College of Arts and Sciences

3 credit(s) Irregularly
Diverse ways in which philosophers from Plato to Wittgenstein have understood the concept of mathematics.
PREREQ: ANY PHI OR JUNIOR STANDING

## PHI 565 - Philosophy of Language

## College of Arts and Sciences

3 credit(s) Irregularly
Concept and phenomenon of language. Logical, epistemological, and metaphysical ramifications of natural language and speech.
PREREQ: PHI 251

## PHI 573 - Philosophy of Physical Science

## College of Arts and Sciences

3 credit(s) Irregularly
Impact of classical mechanics, relativity, and quantum theory on philosophical accounts of space, time, matter, and causality.
PREREQ: ANY PHI OR JUNIOR STANDING

## PHI 575 - Philosophy of Social Science <br> College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: SOS 575
Philosophical and methodological issues in social and behavioral science. Role of laws in explanation of human action, methodological individualism and holism, functional explanation, value-neutrality, behaviorism, and com puter simulation.

## PHI 576 - Philosophy of Mind

## College of Arts and Sciences

3 credit(s) Irregularly
Advanced study of topics in philosophy of mind.
PREREQ: PHI 301 OR PHI 376 OR PHI 377 OR
PHI 378 OR GRADUATE STANDING

## PHI 583 - Metaphysics

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to metaphysical inquiry.
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

## PHI 593 - Ethics and the Health professions

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 551
Ethical theories in professional, organizational, and political-economic fields in health care. Specific issues: assisted suicide, professional codes, ethics of "cost- cutting" and justice with
respect to care.

## PHI 594 - Bioethics

College of Arts and Sciences
3 credit(s)
Crosslisted with: REL 552
Use of ethical theory in thinking about case problems in health care. Moral dilemmas: use of reproductive technologies, abortion, surrogate motherhood, research with humans, refusal and withdrawal of treatment, physician-assisted suicide.

## Physics

## PHY 101 - Major Concepts of Physics I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Explores the fundamental laws which govern the universe with emphasis on the concept of energy as a unifying principle. No science prerequisites. Knowledge of elementary algebra required. Includes Laboratory.

## PHY 102 - Major Concepts of Physics II

College of Arts and Sciences
4 credit(s) At least $1 x$ fall or spring Explores the fundamental laws which govern the universe. Presents overview of basic ideas and contemporary research in physics. No science prerequisites. Knowledge of elementary algebra required. Includes Laboratory.
PREREQ: PHY 101 OR PHY 211 OR AP PHYSICS B EXAM SCORE MIN 3 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3

## PHY 211 - General Physics I

## College of Arts and Sciences

3 credit(s) Every semester
First half of a two semester introduction to classical physics including mechanics and thermal physics. Uses calculus. Knowledge of plane trigonometry required.
COREQ: (PHY 221 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3) AND (MAT 285 OR MAT 295 OR AP MAT CALC AB EXAM SCORE MIN 3 OR AP MAT CALC BC EXAM SCORE MIN 4)

## PHY 212 - General Physics II

## College of Arts and Sciences

3 credit(s) Every semester
Second half of a two semester introduction to classical physics including electricity, magnetism and light.
PREREQ: ((PHY 211 OR PHY 215) AND PHY 221) OR AP PHYSICS C MECH EXAM SCORE MIN 3 COREQ: (PHY 222 OR AP PHYSICS C ELEC \& MAG EXAM SCORE MIN 3) AND (MAT 286 OR MAT 296 OR AP MAT CALC BC EXAM SCORE MIN 4 OR AP MAT AB EXAM SCORE MIN 4)

## PHY 215 - General Physics I (Honors and Majors)

## College of Arts and Sciences

3 credit(s) Every semester
Introductory calculus-based physics emphasizing
topics important in modern research and technology. for students in the Honors Program, prospective physics major, and others with strong science interests. Newtonian mechanics, chaos, sound and fluids. Student cannot receive credit for both PHY 215 and PHY 211.
COREQ: (PHY 221 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3) AND (MAT 286 OR MAT 295 OR AP MAT CALC AB EXAM SCORE MIN 3 OR AP MAT CALC BC MIN SCORE 4)

## PHY 216 - General Physics II (Honors \& Majors)

## College of Arts and Sciences

3 credit(s) Every semester
Electricity, magnetism and light. Student cannot receive credit for both PHY 216 and 212.
PREREQ: ((PHY 211 OR PHY 215) AND PHY 221) OR AP PHYSICS C (MECH) EXAM SCORE MIN 3 COREQ: (PHY 222 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3) AND (MAT 286 OR MAT 296 OR AP MAT CALC BC EXAM SCORE MIN 4 OR AP MAT AB EXAM SCORE MIN 4)

## PHY 221 - General Physics Laboratory I

## College of Arts and Sciences

1 credit(s) Every semester
Techniques of laboratory work: treatment of random errors, graphical representation of data. Experimental demonstration of principles of mechanics, thermodynamics, and waves (of vector forces, conservation of momentum and energy, thermal properties of gases). COREQ: PHY 211 OR PHY 215 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3

## PHY 222 - General Physics Laboratory II

## College of Arts and Sciences

1 credit(s) Every semester
Experimental study of principles of electromagnetism and their application in electrical circuits. Use of electronic instruments, such as the oscilloscope.
COREQ: (PHY 212 OR PHY 216 OR AP PHYSICS
C (ELEC \& MAG) EXAM SCORE MIN 3) AND (MAT 286 OR MAT 296 OR AP MAT CALC BC EXAM SCORE MIN 4 OR AP MAT CALC AB EXAM SCORE MIN 4)

## PHY 250 - Physics Journal Workshop

College of Arts and Sciences
1 credit(s) At least $1 x$ fall or spring
Introduction to physics research by reading and critical discussion of articles from the current
or recent physics literature. For physics majors and minors; others may enroll with permission of instructor.
PREREQ: PHY 211 OR PHY 215 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3
Repeatable

## PHY 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## PHY 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department. Repeatable

## PHY 305 - Solar Energy Science and Architectures

## College of Arts and Sciences

3 credit(s) Irregularly
Properties of solar energy. Photons, blackbody radiation, and the planetary greenhouse effect. Solar thermal, solar electric, and biomass applications. Architectural and economic implications.
COREQ: MAT 285 OR MAT 295 OR AP MAT CALC AB EXAM SCORE MIN 3 OR AP MAT CALC BC EXAM SCORE MIN 4

## PHY 306 - Nuclear Physics in our Lives

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring An introduction to nuclear physics and applications of nuclear physics in our society. Includes fundamentals of nuclear structure, decays, and energy. Applications include industrial uses, medicine, and power generation.

## PHY 307 - Science and Computers I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring An introduction to the use of computers to solve problems in science. Development of algorithms, numerical solutions, plotting and manipulating data, statistical analysis and problems involving random numbers.
COREQ: PHY 211 OR PHY 215 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3

## PHY 308 - Science and Computers II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Continuation of PHY 307. Exploration of topics in computational science using modern programming and visualization techniques. A core component comprises successful completion of computer-based labs.
PREREQ: PHY 307

## PHY 312 - Relativity and Cosmology: Einstein and Beyond

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Introduces Einstein's special and general relativity. Understanding E=mc2, curved space-time, higher dimensions, and the Big Bang. No science prerequisite. For non-majors and majors. SCI 612 students will develop educational materials for the teaching of relativity.
PREREQ: MAT 285 OR MAT 295 OR AP MAT CALC AB EXAM SCORE MIN 3
COREQ: MAT 286 OR MAT 296 OR AP MAT CALC AB EXAM SCORE MIN 4 OR AP MAT CALC BC EXAM SCORE MIN 4

## PHY 315 - Biological and Medical Physics

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Double Numbered with: PHY 615
Signal, energy, and information processing by cells. Evolution; cell structure and function; neurophysiology; biological control, chaos; biological motors, pumps, and receptors; systems analysis, scaling, dimensionality; spectroscopy and biomedical imaging. Additional work required of graduate students.
PREREQ: PHY 212 OR PHY 216 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3

## PHY 317 - Stellar and Interstellar Astrophysics

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to astrophysics, with emphasis on stars and the interstellar medium. Physical laws of gravitation, charged particles, and radiation, applied to nucleosynthesis and stellar formation/ evolution. Physical and chemical processes in the interstellar medium.
PREREQ: PHY 102 OR PHY 212 OR PHY 216 OR AP PHYSICS B EXAM SCORE MIN 3 OR AP PHYSICS C (ELEC \& MAG) MIN SCORE 3 COREQ: MAT 286 OR MAT 296 OR AP MAT CALC AB EXAM SCORE MIN 4 OR AP MAT CALC BC MIN SCORE 4

## PHY 319 - Introduction to Astrobiology <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> The emergence and development of life in the universe. Topics: elements of astrophysics, origin of life on earth, current research in astrobiology. PREREQ: MAT 285 OR MAT 295 OR AP MAT CALC AB EXAM SCORE MIN 3 OR AP MAT CALC BC MIN SCORE 4

## PHY 344 - Experimental Physics I

College of Arts and Sciences
4 credit(s) Every semester Laboratory projects emphasizing mechanics, electromagnetism, and atomic physics. Projects include chaos in a compass needle, the FranckHertz experiment, and the Hall effect. PREREQ: (PHY 211 OR PHY 215 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3) AND (PHY 212 OR PHY 216 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3)

## PHY 351 - Instrumentation in Modern Physics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Double Numbered with: PHY 651
Familiarizing students with instrumentation used in modern laboratories. Topics include detectors used in science and medicine, electronic noise mechanisms, computerized data acquisition systems. Independent research projects are encouraged. Additional work required of graduate students.
PREREQ: PHY 221 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3
COREQ: PHY 222 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3

## PHY 360 - Vibrations, Waves and Optics

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Exploration of the rich behavior of vibrating
systems. Simple harmonic motion, driven oscillators and resonance, normal modes, Fourier analysis, geometrical optics, diffraction and interference.
PREREQ: PHY 212 OR PHY 216 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3

## PHY 361 - Introduction to Modern Physics

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Modern physical theories, including relativity, quantum mechanics. Applications to molecular, atomic, and nuclear structures. Principles of lasers, nuclear reactors. Particle accelerators. PREREQ: PHY 212 OR PHY 216 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3

## PHY 398 - Junior seminar in Energy and its Impacts

## College of Arts and Sciences

1 credit(s) At least 1x fall or spring Interdisciplinary examination of energy use and its impact on the natural and social environment. Special focus on issues in the Syracuse area.

## PHY 399 - Practicum and Seminar in

 Physics Education
## College of Arts and Sciences

1-3 credit(s) Irregularly
Student peers assist in a physics class and participate in a physics education seminar. Questioning, curriculum, teaching methods, assessment.

## PHY 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHY 424 - Electromagnetics I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ELE 324
Vector analysis, electrostatics, LaPlace's equation, dielectrics, magnetostatics, magnetic materials. PREREQ: (PHY 212 OR PHY 216 OR AP PHYSICS C (ELEC \& MAG) EXAM SCORE MIN 3) AND MAT 397

## PHY 425 - Electromagnetics II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ELE 325
Faraday's Law, displacement current, Maxwell's equations, plane waves, power flow in waves, reflection and transmission of waves, wave-guides, radiation, and antennas.
PREREQ: PHY 424 OR ELE 324

## PHY 444 - Soft Matter

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to the physics of soft (easily deformable) materials such as polymers, liquid crystals, membranes, and colloids. Learn to appreciate the myriad of phases in the world of squishy physics and their statistical behavior.

## PHY 451 - Problems of Contemporary Physics

## College of Arts and Sciences

2 credit(s) At least 1x fall or spring
Integrated approach to solving physics problems
that may cross traditional boundaries between courses. Improve the preparation of students for post-graduate education and physics-related careers.
COREQ: PHY 361

## PHY 462 - Experimental Physics II

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Laboratory projects emphasizing optics and nuclear physics. Projects include diffraction, interferometry, detection of nuclear radiation, interaction of radiation and matter, and nuclear lifetime measurements.
PREREQ: PHY 344

## PHY 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## PHY 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## PHY 498 - Capstone Seminar in Energy and its Impacts

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Study of a local energy-related issue.. Study will be carried out in an interdisciplinary team. For students in the Integrated Learning Major on Energy and its Impacts.
PREREQ: PHY 398

## PHY 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## PHY 523 - Advanced Mechanics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Moving coordinate systems, systems of particles, mechanics of rigid bodies. Lagrangian mechanics, normal modes of vibrating systems.
PREREQ: PHY 360

## PHY 531 - Thermodynamics and Statistical Mechanics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Laws of thermodynamics, temperature, work, heat. Thermodynamic potentials and methods. Application to special systems, low-temperature physics. Classical statistical mechanics. Quantum statistics. Connections between thermodynamics and statistical mechanics.
PREREQ: PHY 361

## PHY 567 - Introduction to Quantum Mechanics I

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring
Problems with classical physics; one dimensional Schrodinger equation, concepts and illustrative problems; N particle systems including separation of center of mass, identical particles, and
Pauli principle; Schrodinger equation in three dimensions.
PREREQ: PHY 361 AND (PHY 424 OR ELE 324)

## PHY 568 - Introduction to Quantum Mechanics II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Angular momentum including raising/ lowering operators and spherical harmonics; hydrogen atom; spin and addition of angular momentum; time independent perturbation theory; structure of and radiation from atoms; scattering; and elementary particles.
PREREQ: PHY 567

## PHY 576 - Introduction to Solid-State Physics

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: ELE 642
Elementary aspects of physics of solids; crystal lattices and diffraction, phonons and thermal properties in crystals, elementary band theory, and semi-conductor physics.
PREREQ: PHY 567

## PHY 580 - International Course

College of Arts and Sciences
1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## PHY 581 - Methods of Theoretical Physics I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Calculus of variations. Fourier series and integrals.
Matrices. Linear vector spaces. Orthogonal polynomials. Sturm-Liouville equations. Singular points of differential equations. Special functions. Distributions.
PREREQ: MAT 511

## Polish

## POL 101 - Polish I

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Polish. No prior experience or admission by placement testing. Students cannot enroll in POL 101 after earning credit for POL 102, POL 201, POL 202, or higher.

## POL 102 - Polish II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Polish.Students cannot enroll in POL 102 after earning credit for POL 201, POL 202, or higher. PREREQ: POL 101

## POL 201 - Polish III

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Polish. Students cannot enroll in POL 201 after earning credit for POL 202 or higher.
PREREQ: POL 102

## POL 202 - Polish IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Polish. Students cannot enroll in POL 202 after earning credit for a course higher than POL 202.
PREREQ: POL 201

## Portuguese

## POR 101 - Portuguese I

## College of Arts and Sciences

## 4 credit(s)

Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Portuguese. No prior experience or adamission by placement testing. Students cannot enroll in POR 101 after successfully completing POR 102, 201, or 202 or higher.

## POR 102 - Portuguese II

College of Arts and Sciences
4 credit(s)
Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Portuguese. Students cannot enroll in POR 102 after successfully completing POR 201, POR 202 or higher.
PREREQ: POR 101

## POR 201 - Portuguese III

## College of Arts and Sciences

## 4 credit(s)

Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Portuguese. Students cannot enroll in POR 201 after earning credit for POR 202 or higher.
PREREQ: POR 102

## POR 202 - Portuguese IV

## College of Arts and Sciences

## 4 credit(s)

Continuing proficiency-based course which further refines and expands previously acquired linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Activities are conducted in Portuguese. Students cannot enroll in POR 202 after earning credit for a course higher than POR 202.
PREREQ: POR 201

## Persian

## PRS 101 - Persian I

College of Arts and Sciences
4 credit(s)
Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Persian. No prior experience or admission by placement testing. Students cannot enroll in PRS 101 after earning credit for PRS

102, PRS 201, PRS 202, or higher.

## PRS 102 - Persian II

College of Arts and Sciences
4 credit(s)
Continuing proficiency-based course, which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Persian. Students cannot enroll in PRS 102 after earning credit for PRS 201, PRS 202, or higher. PREREQ: PRS 101

## PRS 201 - Persian III

College of Arts and Sciences
4 credit(s) Continuing proficiency-based course, which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Persian. Students cannot enroll in PRS 201 after earning credit for PRS 202 or higher.
PREREQ: PRS 102

## PRS 202 - Persian IV

College of Arts and Sciences
4 credit(s)
Continuing proficiency-based course, which further refines and expands previously acquired linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Activities are conducted in Persian. Students cannot enroll in PRS 202 after earning credit for a course higher than PRS 202.
PREREQ: PRS 201

## Political Science

## PSC 121 - American National

 Government and Politics
## College of Arts and Sciences

3 credit(s) Every semester
American political institutions. Basic principles embedded in structure and practices of American government. Practical consequences of this political system for the citizen. Credit is given for PSC 121 or PSC 129, but not both.

## PSC 122 - American State and Local Government and Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Role of state and local politics in American politics. Changing notions of proper political process and governance. Nature of the political process. State and local interactions. Politics and policy pursuance.

## PSC 123 - Comparative Government and Politics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Comparison of selected governmental institutions, individual and collective political actors, and issues across the industrialized and developing world. Particular attention to dynamics of socioeconomic and political change.

## PSC 124 - International Relations

## College of Arts and Sciences

3 credit(s) Every semester
Foreign policy, decision making, comparative foreign policy, international transactions, and the international system. Credit is given for PSC 124 or PSC 139, but not both.

## PSC 125 - Political Theory

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: PHI 125
Introduction to theories of major modern political philosophers (Locke, Rousseau, Hume, J.S. Mill, Marx). Contemporary theories of liberty, justice, and equality.

## PSC 129 - American National

## Government and Politics (Honors)

## College of Arts and Sciences

3 credit(s) Irregularly
American political institutions and their founding. The public role in a democratic regime. Ability of contemporary arrangements to meet the demands of the modern world. Credit is given for PSC 121 or PSC 129, but not both.

## PSC 139 - International Relations (Honors)

## College of Arts and Sciences

3 credit(s) Irregularly
Major world views which comprise contemporary international relations. Lectures, readings, journal writing, and small group discussion. Credit is given for PSC 124 or PSC 139, but not both.

## PSC 141 - Liberty and Power from the Ancient World to Modernity

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Overview of those historical, social and political processes that have led to the birth of the modern world. Offered only in Florence for Discovery Florence students.

## PSC 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not
covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PSC 202 - Introduction to Political Analysis <br> \section*{College of Arts and Sciences}

3 credit(s) Every semester Introduction to important political science concepts; basics of political argumentation and reasoning; and basic quantitative research and analysis techniques.

## PSC 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## PSC 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## PSC 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PSC 302 - Environmental Politics and Policy

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
The environmental policy process and the politics that influence the formulation and adoption of environmental policies in the United States.

## PSC 303 - The Development of the American State

## College of Arts and Sciences

3 credit(s) Irregularly
The size and scope of the national government has been a central organizing principle of political conflict throughout American history. This course explores the American state's changing relationship to society and economy over time.

## PSC 304 - The Judicial Process

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
American legal structure and process: policy making by courts, relations with other branches of the national government, and the changing role of the Supreme Court in our federal political system.

## PSC 305 - U.S. Congressional Politics

College of Arts and Sciences
3 credit(s) Irregularly
Functions of the legislative branch: representation, control of the public purse, and executive oversight. Recent changes brought about by electoral forces and internal reforms.

## PSC 306 - African American Politics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 306
Introduction to the African American experience in the American political system, from the colonial period to the present. Organization/leadership, federal institutions/relations, sociopolitical movements, and electoral politics.

## PSC 307 - The Politics of Citizenship

College of Arts and Sciences
3 credit(s) At least 1x fall or spring How governments understand membership through citizenship laws and practices. Includes the history of citizenship, evolution of modern citizenship, migration, and "post-national" citizenship.

## PSC 308 - The Politics of U.S. Public Policy

College of Arts and Sciences
3 credit(s) Irregularly
Relationship between American political institutions, politics and public policy. Significance of public policies for democratization in the U.S., highlighting dynamics of race, class, and gender. Development and implementation of policies.

## PSC 309 - Interest Group Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Uses theoretical and real world materials to examine the strengths and weaknesses of interest groups in American politics. The role of groups in shaping public interest and influencing policy decisions.

## PSC 311 - American Political Parties <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Historical and contemporary roles of political parties in American government and politics.

## PSC 312 - Urban Government and Politics <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Changes in populations, notions of governance, and means of governance in city and metropolitan politics. Effects of political arrangements on responses to people and the public policies pursued. Role of private power.

## PSC 313 - Campaign Analysis

## College of Arts and Sciences

3 credit(s) Irregularly
In-depth analysis of specific campaigns. Review of literature, followed by analysis, involving: media review, targeting analyses, survey writing, polling, survey analysis, exit polling, and review of election results. Acquisition and application of skills.

## PSC 314 - Public Opinion and Electoral Behavior

## College of Arts and Sciences

3 credit(s) Irregularly
American mass public; origins, nature, effects of its political beliefs, and patterns of its voting behavior.

## PSC 315 - Politics and Media

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Sometimes called the 'fourth branch' of government, the media are an integral part of the political landscape. This course explores the role of the media in the operation of government and in the conduct of politics.

## PSC 316 - The Supreme Court in American Politics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring The Court's dual character as a legal and political institution. Explores the Court's decision-making process and the impact of those decisions on politics and policy.

## PSC 317 - Local Internship

## College of Arts and Sciences

3 credit(s) Every semester
Students work in conjunction with members of Congress, state legislature, or in local political campaigns. Representatives of these offices come to seminars for discussions about working in government and politics.

## PSC 318 - Technology, Politics, and Environment

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Advanced technology as a focal point of
governmental and political conflict in the United States and other nations. Interplay of technology and politics as a struggle over who will control the future and for what ends.

## PSC 319 - Gender and Politics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: WGS 319
Relationships between gender and American political institutions, law, and policymaking processes. How social movements based on gender, prevailing gender ideologies, and gender relations have shaped American politics. Exploring how the American state has shaped the political meanings and relative positions of power associated with men and women.

## PSC 321 - Populism and Conspiracy Culture

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Populist movements and roots of conspiracy culture in American politics. Populist ideology centered around suspicion of a manipulative power elite is a recurrent theme in American political discourse of both left and right.

## PSC 322 - International Security

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring Introduction to the field of security studies within the discipline of Political Science. Case studies with a special focus on the U.S. role in fostering international security, and contemporary dilemmas for U.S. national security.

## PSC 323 - Politics of the Executive

 BranchCollege of Arts and Sciences
3 credit(s) Irregularly
This course offers in-depth examination of the historical development of the U.S. Executive branch, particularly the capacity of the President and the bureaucracy for making and implementing policy within the larger political system.

## PSC 324 - Constitutional Law I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Introduction to American constitutional interpretation. Historical survey of basic Supreme Court doctrines focusing on the first 150 years of judicial action. The Court's role as a political institution.

## PSC 325 - Constitutional Law II

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Contemporary constitutional interpretation,
focusing on the Bill of Rights and the fourteenth amendment. Issues of race, gender, privacy, property, free speech, religious diversity, and political representation.

## PSC 326 - Foundations of American Political Thought <br> College of Arts and Sciences <br> 3 credit(s) Irregularly <br> Crosslisted with: HST 383 <br> American political thought from the Puritans to Lincoln. American Revolution, establishment of the Constitution, and Jeffersonian and Hamiltonian systems.

## PSC 327 - Modern American Political Thought

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 342
American political thought from the impact of Darwinian science to the present. Basic thought patterns of 20th-century public life and philosophical foundations of contemporary political movements.

## PSC 328 - American Social Movements

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: WGS 318
Social movements were always integral to
American politics. Includes emergence, strategies, political context and influence of temperance, abolition of slavery, women's suffrage, labor, civil rights, anti-war, feminism, nuclear freeze, gay rights, and global justice movements.

## PSC 329 - The Modern American Presidency

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Crosslisted with: HST 341
Evolution, operation, and perceptions of the American presidency during the last quartercentury. Modern chief executives and factors contributing to their success or failure.

PSC 330 - Political Economy of Gender in Industrialized Countries

## College of Arts and Sciences

3 credit(s) Irregularly
Asks why men and women are treated differently within the family, at work, and in politics by examining the relative importance of societal norms, religion, public policy and individual economic decisions.

## PSC 331 - Canadian Politics

College of Arts and Sciences
3 credit(s) Irregularly

An introduction to Canadian politics with a comparative perspective, this course covers core features of national government (parliament, courts, federalism) plus distinctive aspects such as Quebec nationalism, multiculturalism and indigenous rights.

## PSC 333 - Politics of Latin America

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: LAS 333
Political processes and institutions in Latin America. The region's experience with modernization.

## PSC 334 - Mexico and the United States

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: LAS 335
The history and politics of Mexico, with special attention to relations between Mexico and the United States and the politics of immigration, NAFTA, the drug trade, and other bilateral issues.

## PSC 335 - Politics of East Asia

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Domestic and international politics of East Asia broadly defined. Political development and structure of major countries: Japan, Korea, and China. Politics of public policy, international, and transnational relations in the region.

## PSC 337 - Political Psychology

College of Arts and Sciences
3 credit(s) Irregularly
Principles of social and cognitive psychology applied to political life. How political beliefs are developed and maintained, how such beliefs affect political behavior, and how individuals matter in policymaking as well as in the mobilization of political movements.

## PSC 338 - Comparative Political Parties

## College of Arts and Sciences

3 credit(s) Irregularly
How and why political parties form. The impact of electoral rules, social structures, and other factors on their organization, influence, and competition. Comparison of parties and national party systems around the world.

## PSC 339 - Transitions to Democracy

## College of Arts and Sciences

3 credit(s) Irregularly
The underlying forces and processes of political regime change and transitions to democracy in the modern world.

## PSC 341 - Politics of Africa

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: AAS 341
Historical foundations of the move towards political freedom, democracy and self rule in Africa. Dynamics of the political process.

## PSC 342 - Religion and Politics in the Israeli-Palestinian Conflict

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 342, MES 342, REL 342
Considers the extent to which religion matters in an enduring ethno-nationalist conflict. Approaches the Israeli-Palestinian conflict from an interdisciplinary perspective that explores the intersection of religion and politics.

## PSC 343 - Politics of Europe

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring The politics of Western and Eastern Europe. Domestic political and political economic institutions and the process of European integration.

## PSC 344 - Politics of the Middle East

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: MES 344
Religious, political, economic, and social dimensions of life in modern Middle East. Legacy of Islam, encounter with Western modernity, Arab-Israeli conflict, and political economy of the region.

## PSC 345 - Islam and Politics in Asia

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 345
Survey of the diverse and protean role Islam plays in Asian public life by analyzing the variegated cultural, political, religious, and social milieu that it has encountered in Central, South, and Southeast Asia.

## PSC 346 - Comparative Third World Politics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: AAS 346
Examines thematically and comparatively the political systems of South America, Asia, and Africa, exploring topics such as colonization, decolonization, nation-building, the postcolonial state and its institutions, the recent wave of democratization, and the challenges of socioeconomic development.

## PSC 347 - Politics of Russia

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Politics of Russia and the former Soviet Union. Political institutions, and political, economic, and social change, particularly since 1991.

## PSC 348 - Politics and the Military

## College of Arts and Sciences

3 credit(s) Irregularly
The military's role in the modern state and in modern society. Broad geographic coverage, including the United States, Europe, Latin America, Africa, the Middle East, and Asia.

## PSC 349 - Politics of Iran

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: MES 349
Historical and theoretical understanding of modern Iranian politics and society from the late 19th century to the present time.

## PSC 350 - Problems in International

 Relations
## College of Arts and Sciences

3 credit(s) Irregularly
Selected problems and issues. Specific topics chosen by the instructor.
Repeatable

## PSC 351 - Political Economy of Development

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring The interrelationship of political, social, and economic factors that produce development outcomes. The role of the state in markets and the relationship between democracy and development.

## PSC 352 - International Law

College of Arts and Sciences
3 credit(s) Irregularly
Fundamental principles and recognized rules that make up international law concerning conduct of nations. Protection of nationals abroad, jurisdiction in territorial waters and on high seas, rights and duties of diplomats and consuls, and the law of treaties.

## PSC 353 - International Organization

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Causes and consequences of collective actions taken by state, intergovernmental, and transnational nongovernmental individual and collective actors. May include global and regional level issues of (human) security, economic and
social development, environmental protection, and resource management.

## PSC 354 - Human Rights and Global Affairs

## College of Arts and Sciences

3 credit(s) Irregularly
Human rights are today a focal point of rhetorical contestation among states, intergovernmental organizations, and transnational networks. This seminar surveys the opportunities and limits of human rights language in promoting social and political change.

## PSC 355 - International Political Economy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Institutions and politics of international economic relations. Trade, investment, macro-economic policy coordination, economic development, global resource issues, and the causes and consequences of global economic integration.

## PSC 356 - Political Conflict

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Theory and practice of political conflict and peacemaking. Issues may include class, race, gender and ethnicity, war, terrorism, and protest.

## PSC 357 - U.S. Foreign Policy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Diplomacy of the United States toward major areas or powers, i.e., Latin America, Far East, and the Soviet Union. National defense, trade, and international organization.

## PSC 358 - Latin American International Relations

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LAS 358
Examines Organization of American States and other regional institutions. Considers how regional cooperation efforts have been shaped by political, economic, and cultural diversity of the countries in the region and by the changing global context.

## PSC 359 - Foreign Policymaking

## College of Arts and Sciences

3 credit(s) Irregularly
How governments and intergovernmental organizations make foreign policy. Formulation of policy, selection among policy strategies, implementation, and evaluation of policy outcomes. Contemporary foreign policies.

## PSC 360 - Sustainability Science and Policy

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: GEO 360
Examines sustainability science, communications, and public policy through the lens of climate-what is known about climate change and impacts, what motivates public understanding, and what actions through mitigation and adaptation make progress toward sustainability.

## PSC 361 - Politics in the Cyber-Age

College of Arts and Sciences
3 credit(s) Irregularly
The impact of the information technology revolution on contemporary domestic and global political systems.

## PSC 362 - Religion, Identity and Power

## College of Arts and Sciences

3 credit(s)
Crosslisted with: REL 355, SOC 362
Examines ascendancy of religious movements; prominence of religious ideas; secularization and religion as a political force; conceptual and historical issues in relation to religious ideas and movements, including various Islamic revivals and the Christian right. Offered in London and Madrid only.

## PSC 363 - Ethics and International Relations

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: PHI 363
The role of ethical concerns, imperatives, and restraints in international relations. Includes realism, just war theory, the ethics of nuclear deterrence, and other topics at the discretion of the instructor.

## PSC 364 - African International Relations

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Crosslisted with: AAS 364
The place of Africans in the international system; specific issues emanating from the decolonization process. Issues of militarism, humanitarianism, peacekeeping, and genocide; challenges of globalization.

## PSC 365 - International Political Economy of the Third World

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 365
Political and economic problems developing
countries face in international economic relations, attempts to solve them. Discusses the making of the international system, the "third world," globalization, trade, debt, multinational corporations, multilateral lending agencies (IMF, World Bank).

## PSC 366 - Representations of the Middle East

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 366
The politics of "gazing" and cultural imagination through critical analysis of how the mass media articulates, transmits, promotes and legitimizes knowledge and information about the Middle East.

## PSC 367-Oil, Water and War

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 367
Examines current level of knowledge about historical connections among war and the resources of petroleum and fresh water. Also looks at how alternative claims about these goods will be expressed in the future.

## PSC 368 - Islam and the West

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 368, MES 368 Topics include globalization and interdependency of faiths, the "clash of civilizations", relations between religion and state in Islam and Christianity and whether it is possible to separate the world into monolithic entities "Islam" and "West". Offered in London only.

## PSC 369 - Global Migration

College of Arts and Sciences
3 credit(s) Irregularly
How should local communities, national governments, and international institutions respond to economic migrants and refugees? Are their policies effective? These questions will be explored through historical and contemporary perspectives from around the world.

## PSC 371 - Democratic Theory and Politics <br> College of Arts and Sciences

3 credit(s) Irregularly
Democracy as a political concept and political process, in a comparative context. Some critiques and challenges facing democratic theory and practice.

## PSC 372 - Marxist Theory <br> College of Arts and Sciences <br> 3 credit(s) Irregularly

Fundamentals of Marxism through the original writings of Marx and Engels. Several interpretations of the various facets of Marxist theory, as developed by social democrats, Leninists, and other socialist thinkers.

PSC 373 - Political Philosophy: The Social Contract Tradition and its Critics

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PHI 317
Political obligation in the writings of the three major social contract theorists, Hobbes, Locke, and Rousseau. Additional reading from their critics such as Burke, Mill, and Marx.

## PSC 374 - Law and Society

## College of Arts and Sciences

3 credit(s) Irregularly
Interaction of law with social values, customs, and organization. Relationship between a society's law and its broader environment.

## PSC 375 - Philosophy of Law

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 397
Central issues in the philosophy of law such as the nature of law and obligation to obey the law; justification of punishment and of state restrictions on individual liberties; justice and the law.

## PSC 377 - Religion and Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Reciprocal relations between religious groups and political systems, especially in the United States. Religious groups as the objects of policy decisions, as sources of governmental legitimacy, and as agents of political and social change.

## PSC 378 - Power and Identity

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Examines classic and contemporary theories of identity and their manifestation in political practice. Also examines basic theories about how identities are constructed and their meaning/ import. Covers race, ethnicity, sexuality, gender, and foreignness.

## PSC 379 - American Slavery and the Holocaust

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 379, PHI 379
An in-depth study of the normative structure of both American Slavery and the Holocaust, focusing upon the ways in which each institution
conceived of its victims and the character of the moral climate that prevailed in each case.

## PSC 382 - Contemporary Political Philosophy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PHI 417
Contemporary contractualist, rights-based, and communitarian theories of social justice.

## PSC 384 - Sexuality and the Law

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: QSX 384
Examines politically significant legal debates regarding gender and sexuality. Issues covered may include privacy rights, discrimination on the basis of sexual orientation and gender identity, family law and parental rights, and same-sex marriage.

## PSC 385 - Rationality and Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to the concept of technical rationality and its role in contemporary political science.

## PSC 386 - Gender, Militarism, and War

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 354, WGS 354
Examines militarism and war and their relationship to gender and power. Particular attention is given to how war impacts people differently across axes of race, class, ethnicity, sexuality, and other forms of identity.

## PSC 387 - Ethnic Conflict

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Examines ethnicity and its effects on politics. Engages the concept of ethnicity, how it structures politics and sparks conflict, and what political tools exist to manage these conflicts.

## PSC 388 - Politics of Globalization

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Examines the causes and consequences of globalization. In particular we explore who wins and who loses from political and economic globalization.

## PSC 389 - Politics of India

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: SAS 389 Introduction to politics in post-independence India. Surveys India's party system, institutional
structures, political practices and socio-economic policies. Examines the reasons for India's democratic stability despite high levels of illiteracy, poverty and ethnic heterogeneity.

## PSC 391 - Revolutions in the Middle East

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 391
A comparative study of revolutions in the Middle East in terms of causes, processes and outcomes.

## PSC 392 - Islamism and Islamist Movements Today

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 392, REL 362
A study of the historical, religious, social and political origins of Islamism and Islamist movements around the world today.

## PSC 393 - Middle Eastern Political Systems

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 393
Study of Middle Eastern political systems in terms of cleavages and crisis.

## PSC 394 - History of Islamic Political

 ThoughtCollege of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 394
A study of Islamic political and social attitudes pertaining to contemporary issues.

## PSC 395 - Democratization in the Muslim World

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MES 395
Reasons for and dynamics of democratization in some Muslim countries.

## PSC 396 - European Integration

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: GEO 396
Focuses on the origins, nature, and likely future course of the European Union. More generally, examines five long-range challenges facing contemporary Europe: Demographic decline; globalization; Civic Integration; Great Power Rivalry; and Sustainable Development.

## PSC 397 - Realism and Power Politics in International Relations

## College of Arts and Sciences

3 credit(s) Irregularly
Realism lies at the core of American international relations. It has been the dominant approach to national security issues since the 1940s. The course covers several important realist theories, as well as critiques and applications.

## PSC 398 - How the United States Became a Great Power

## College of Arts and Sciences

3 credit(s) Irregularly
Between 1785 and 1900, the USA grew into a great power. This course investigates the foreign relations of the USA during this period. Which international relation theories best explain America's relationship with the European great powers?

## PSC 399 - God in Political Theory

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 319, REL 371
An exploration of the key approaches to the relationship between the idea of God and religion and politics in political theory and philosophy.

## PSC 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PSC 405 - Politics of the European Union

## College of Arts and Sciences

3 credit(s)
Politics of European integration from a variety of perspectives: theoretical, historical, institutional, and policy-making. Fundamental post- war political process in modern-day Europe. Offered regularly through SU Abroad.

## PSC 406 - Citizenship from Modernity

 to Globalization
## College of Arts and Sciences

3 credit(s)
Crosslisted with: PHI 406
Offered only in Florence. Citizenship as a major crossroads in European political thought: key thinkers; permutations throughout European history; impact of globalization and European unification on concepts of citizenship, liberty, and justice.

## PSC 409 - The European Union

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Creation and current workings of the European Union. The relationship between the member states and issues such as a United States of Europe. Mandatory trip to Brussels (EU Commission, Parliament, and U.S. EU delegation). Offered in London only.

## PSC 411 - Senior Seminars

## College of Arts and Sciences

3 credit(s) Irregularly
Integrates student coursework by providing in-depth analysis of a particular topic. Recommended seminar choice is one in a subfield of the discipline in which the student has some prior preparation.

## PSC 412 - Global Governance: The United Nations System

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: IRP 412
The theory and practice of global governance and international diplomacy through an in-depth study of the United Nations system. Critique readings and discuss current UN-related events. Fulfills the IR capstone for International Law and Organizations (ILO). Permission of instructor. PREREQ: PSC 124 OR PSC 139

## PSC 413 - Identity and Difference

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PHI 413, WGS 413
Interdisciplinary approach to examine concepts of identity and difference, challenges notions of subjectivity, nation and gender. Philosophical, political, and gender-related dimensions explored. Offered only in Florence.

## PSC 414 - European Identity Seminar

## College of Arts and Sciences

2 credit(s) Every semester
Eleven-day interdisciplinary field studies seminar explores the multi-layered cultural and political identities in contemporary Europe, their overlapping (and at times, contradictory nature), and their effect on political and social developments. Offered in Strasbourg only. Repeatable 1 time(s), 4 credits maximum

## PSC 421 - Contemporary Central and Eastern Europe

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HST 411
Offered only in Strasbourg. This course is designed to help students grasp the overall nature of
contemporary Eastern and Central Europe, with emphasis on the breakup of the Sovet Union, and challenges of democratization and of EU unification.

## PSC 422 - Understanding 20th Century Spain

## College of Arts and Sciences

3 credit(s) Every semester Crosslisted with: HST 412
Offered only in Madrid. Course begins with War of Cuba and ends with Spain's new role in EU, NATO and UN. Particular focus on the rapid changes within Spain during this period and how these were accomplished.

## PSC 424 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 424, IRP 424, LAS 424
Offered only in Santiago. The time period (1940-present) and its significance and contributions to the configuration of social, political and economic aspects of Chile today. Relies on primary sources, comparisons within the Southern Cone, and a focus on US role and influence during this period.

## PSC 425 - Hong Kong in the World Political Economy

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Hong Kong. Role of Hong Kong in world political economy since creation by British after Opium Wars, to position as leading export economy and its retrocession to China in 1997.

## PSC 427 - Policy Seminar/ <br> Contemporary Europe

## College of Arts and Sciences

3 credit(s) Every semester Offered only in Strasbourg. Course gives a coherent contemporary picture of Europe in political/social/economic area and position in the world, with particular emphasis on the European Union.

## PSC 428 - Contemporary Issues in

 Chile and Latin America
## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 406, IRP 334, LAS 334, SPA 334
Offered only in Santiago. This seminar features in-situ lectures and activities in Chile, Argentina and Uruguay introducing important political, sociological and environmental issues in the Southern Cone region.

## PSC 429 - European Human Rights

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Strasbourg. Introduction to current
European human rights law. Through study of European Convention on Human Rights, students learn about culture/morals/values of peoples of Europe.

## PSC 431 - China in Transition

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in Beijing. Seminar examines the unprecedented, multi-faceted transitional changes occurring in China since the late 1970s. Impact of reforms on China's external relations.

## PSC 432 - The Pale and Beyond

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 312
Field studies seminar based in Dublin and Belfast, explores whether a shared sense of being Irish exists despite the struggle and separation between the largely Catholic south and the largely

## PSC 441 - Europe and International Security Issues

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 441
Offered only in Strasbourg. Historical evolution of the concept of international security within the framework of European security-related institutions and the place of Europe in the context of new security challenges.

## PSC 442 - Democratization in East Asia

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Offered only in Hong Kong. Examines the efforts at democratization in East Asia, including such early efforts as the May Fourth Movement in China (1920s-1930s) and the Taisho Democracy in Japan (1920s). Comparisons are made with current situations in Taiwan, Hong Kong and South Korea.

## PSC 444 - Culture, Business and Political Economics in East Asia

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 444, INB 444, IRP 444 Offered only in Hong Kong. Examines the historical and contemporary forces that shape the cultural, social and economic institutions in East Asia and how these institutions affect one another.

## PSC 445 - Contemporary British Politics and the Modern World

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 445
Offered only in London. British political system and the historical factors shaping it, as well as Britain's role in creating the modern world and its place in the world today.

## PSC 450 - Undergraduate Research Program <br> College of Arts and Sciences <br> 1-4 credit(s) Every semester <br> Repeatable

## PSC 452 - Italy: Past, Present and Future Challenges

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: HST 452
Offered only in Florence. Italian society and politics from unification to present. Topics include role of the family, emigration and immigration, stereotypes and regional identities, processes and components of Italian society and culture. Analysis of current situation and future challenges.

## PSC 453 - Twentieth Century Europe

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HST 453
Politics, society, war, and peace in Europe, 1919-1992. Nazi Germany, WW II, the Cold War, post-war reconstruction, social and economic transformations, and the revolutions of 1989 in Eastern Europe. Offered only in Florence.

## PSC 456 - Religion and Conflicts in Contemporary Europe

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 356
Offered only in Strasbourg. Examines continent's long history of religious conflict, especially ways in which local and global religious tensions have developed in recent years.

## PSC 458 - Contemporary Issues in Turkey

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: IRP 458, SOC 458
Offered only in Istanbul. Key political and social issues in contemporary Turkey. Democratization; relationship between secularism, the role of the military and Islam in political life; foreign policy including Turkish-US relations; nationalism, minorities, gender, human rights. Additional work
required of graduate students.

## PSC 462 - Globalization Development and Environment

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: ECN 362
Offered only in London. Differing perspectives on changing global economy and nature of modern state. Key ideas regarding development through experiences of developing countries in Asia and Africa.

## PSC 470 - Experience Credit

College of Arts and Sciences
1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable
PSC 471 - Internships: International, National, State

College of Arts and Sciences
3 credit(s) Every semester Internships spent off campus in Washington, a state capitol, or an international or foreign organization. Proposal required; faculty sponsor must be arranged. May be counted toward major or minor by petition.

## PSC 489 - Readings in Political

 Science (Honors)College of Arts and Sciences
1-6 credit(s) Every semester Directed tutorial-type program of readings in selected aspects of political science.

## PSC 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## PSC 495 - Distinction Thesis Seminar in Political Science I

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Individual research work in conjunction with seminar participation guided by faculty seminar instructor and individual mentors. Defining thesis projects. Senior political science students only. Permission of instructor.

## PSC 496 - Distinction Thesis Seminar in Political Science II

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Thesis students present ongoing research, constructively engaging with other thesis writers, and working with faculty mentor to complete research. Individual research work in conjunction with seminar participation. Senior political science students only. Permission of instructor.

## PSC 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## PSC 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## Psychology

## PSY 205 - Foundations of Human Behavior

## College of Arts and Sciences

3 credit(s) Every semester
Fundamental principles of mental life and human behavior. Significance of psychology in human relationships and self-understanding.

## PSY 209 - Foundations of Human

 Behavior/ Honors Section
## College of Arts and Sciences

3 credit(s) Every semester
Honors secton of PSY 205

## PSY 223 - Introduction to Cognitive Neuroscience

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
The science of how thought processes are instantiated in the brain. Functional neuroanatomy, cognitive neuroscience methods, and cognitive neuroscience theory in broad cognitive areas such as attention, perception, memory, language, and decision-making. PREREQ: PSY 205 OR PSY 209

## PSY 252 - Statistical Methods II

## College of Arts and Sciences

3 credit(s) Every semester Distributions, graphs, exploratory data analysis, and descriptive statistics, sampling and
experiments Sampling distributions. Correlation and regression. Confidence intervals and significance tests for measured data and count data. Computer applications.
PREREQ: STT 101 OR MAT 121 OR MAT 221 OR (MAT 285 AND MAT 286) OR (MAT 295 AND MAT 296)

## PSY 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
PREREQ: PSY 205 OR PSY 209
Repeatable

## PSY 274 - Social Psychology

College of Arts and Sciences
3 credit(s) Every semester Introduction to scientific study of the social behavior of individuals; experimental approach. Social influence, conformity, social perception, attitude changes, small groups, and collective behavior.
PREREQ: PSY 205 OR PSY 209

## PSY 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. PREREQ: PSY 205 OR PSY 209
Repeatable

## PSY 291 - Research in Clinical/Health Psychology

## College of Arts and Sciences

1-6 credit(s) Every semester
Research including the prevention/treatment of alcohol and other substance use disorders, behavioral aspects of HIV/AIDS, religious/ spiritual/psychological aspects of cardiovascular disorders, psychological aspects of tobacco addiction, and stress and coping.
PREREQ: PSY 205 OR PSY 209
Repeatable 5 time(s), 6 credits maximum

## PSY 292 - Research in Cognitive Neuroscience Psychology

## College of Arts and Sciences

1-6 credit(s) Every semester
Research including changes in cognitive functioning, information processing, and memory associated with aging; neurobiology of learning; computational neuroscience and quantitative models of cognitive declines.

PREREQ: PSY 205 OR PSY 209
Repeatable 5 time(s), 6 credits maximum

## PSY 293 - Research in Developmental Educational Psychology <br> College of Arts and Sciences <br> 1-6 credit(s) Every semester <br> Research including neurological and family factors related to children's health and wellbeing, identification/treatment of children with developmental problems, school-based interventions for children's academic and behavioral problems. <br> PREREQ: PSY 205 OR PSY 209 <br> Repeatable 5 time(s), 6 credits maximum

## PSY 294 - Research in Social Personality Psychology

College of Arts and Sciences
1-6 credit(s) Every semester
Research including psychological prejudice, social stigma, interpersonal perception, accuracy in impression formation, intergroup relations, motivational aspects of social cognition, gender, social/personality development across the lifespan, and forensic psychology.
PREREQ: PSY 205 OR PSY 209
Repeatable 5 time(s), 6 credits maximum

## PSY 313 - Introduction to Research Methodology

College of Arts and Sciences
3 credit(s) Every semester
Logic and methods of psychological research. Development of research questions, selection of appropriate methods, and interpretation of results. Statistical background not needed. PREREQ: PSY 205 OR PSY 209

## PSY 315 - Drugs and Human Behavior

## College of Arts and Sciences

3 credit(s) Every semester
Effects of psychoactive drugs on human behavior. Basic pharmacology and neurobiology, history, mechanism of action, short- and long-term effects, use and abuse of various psychoactive drugs.
PREREQ: PSY 205 OR PSY 209

## PSY 321 - Introduction to Sensation and Perception

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Common properties of sensory and perceptual systems and their physiological bases, emphasizing information processing.
PREREQ: PSY 205 OR PSY 209

## PSY 322 - Cognitive Psychology

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Means by which humans extract information from the environment. Feature extraction and pattern recognition, mechanisms of selective attention, and encoding and retrieval in short-term and longterm memory.
PREREQ: PSY 205 OR PSY 209

## PSY 323 - Brain and Behavior

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Basic functions of the brain and manner in which they relate to behavior. Methodology: brain stimulation, recording, and ablation. PREREQ: PSY 205 OR PSY 209

## PSY 324 - Developmental Biopsychology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Sequence of the biological development of humans and animals. Brain, glands, and other structures that underlie the development of behavior potential. Behavior genetics, neural and behavioral teratology, aging processes, nutritional factors, disease.
PREREQ: PSY 205 OR PSY 209

## PSY 329 - Biopsychological Perspectives on Women's Health

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: WGS 329
Psychoanalytic and evolutionary
theories of gender and adaptive fitness; pscyhoneuroimmunological perspectives on sexually influenced disease processes, aging, and biopsychological influences on women's health. PREREQ: PSY 205 OR PSY 209

## PSY 331 - Laboratory in Sensation and Perception

## College of Arts and Sciences

2 credit(s) Odd academic yr e.g. 2007-8 Techniques and experimental design for research in human sensation and perception. Develop skills in conducting experiments, designing research projects, and writing research reports.
PREREQ: (PSY 205 OR PSY 209)
COREQ: PSY 321

## PSY 332 - Laboratory in Cognitive Psychology <br> College of Arts and Sciences <br> 2 credit(s) At least 1x fall or spring <br> Experimental design and techniques for research in human memory and cognition. Students

conduct class research studies.
PREREQ: (PSY 205 OR PSY 209)
COREQ: PSY 322

## PSY 334 - Laboratory in Developmental Biopsychology

## College of Arts and Sciences

2 credit(s) At least 1x fall or spring Observing and quantifying changes in ethologically relevant behaviors during development. Effects of early experience on visual, olfactory, and exploratory behaviors.
PREREQ: (PSY 205 OR PSY 209) COREQ: PSY 324

## PSY 335 - Psychology of Childhood

## College of Arts and Sciences

3 credit(s) Every semester
Principles of psychological development and problems of adjustment during childhood. Intellectual, social, and emotional development. PREREQ: PSY 205 OR PSY 209

## PSY 336 - Psychology of the Adolescent

College of Arts and Sciences
3 credit(s) Irregularly
Characteristics, needs, and problems of adolescence. Principles of psychology important to those who guide and teach adolescents. PREREQ: PSY 205 OR PSY 209

## PSY 337 - Psychology of Adult Life:

 Maturity and Old Age
## College of Arts and Sciences

3 credit(s) Irregularly
Adulthood life span from developmental perspective. Cognitive, social, biopsychological, and personality development. Psychosocial forces affecting adult development and aging in contemporary American society.
PREREQ: PSY 205 OR PSY 209

## PSY 353 - Psychological Measurement

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: PSY 653
Principles of measurement with respect to the development and use of norm referenced and criterion referenced tests. Issues related to test bias and assessment. Permission of Instructor. PREREQ: PSY 205 OR PSY 209

## PSY 365 - Educational Psychology

College of Arts and Sciences
3 credit(s) Irregularly
Behavior in school situations. Analysis and application of principles of learning, motivation, and control of conduct.
PREREQ: PSY 205 OR PSY 209

## PSY 373 - Human Memory

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Scientific study of human memory. Focus on quantitative effects of episodic memory tasks. Free recall, serial recall, paired associates, recognition memory, recency and associative effects. Theoretical perspectives including Atkinson and Shiffrin model. Cognitive neuroscience of memory.
PREREQ: (PSY 205 OR PSY 209) AND (PSY 322 OR COG 301)

## PSY 375 - Cross-Cultural Psychology

College of Arts and Sciences
3 credit(s) Irregularly
Comparative analysis of psychological research conducted among non-Western and EuroAmerican peoples. Influence of cultural variables on emotional and cognitive development, perception, socialization, and group behavior. PREREQ: PSY 205 OR PSY 209

## PSY 376 - Human Behavior and Public Policy

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Search for relevance in psychological research techniques, findings, and theories. Contemporary social issues to which psychology potentially contributes.
PREREQ: PSY 205 OR PSY 209

## PSY 379 - The Social Psychology of Stigma

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Current social psychological research on why some groups are devalued, how individuals are affected by and cope with being members of such groups, and interactions between stigmatized and non-stigmatized individuals.
PREREQ: (PSY 205 OR PSY 209) AND PSY 274

## PSY 382 - Health Psychology

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Psychological, behavioral, and social influences on health and illness. Why people stay healthy, why they become ill, and how they respond when they do get ill.
PREREQ: PSY 205 OR PSY 209

## PSY 383 - Laboratory in Health Psychology

## College of Arts and Sciences

3 credit(s) Irregularly
Applied study of research questions, techniques, methods, and practices in the field of health psychology.

PREREQ: (PSY 205 OR PSY 209)
COREQ: PSY 382

## PSY 384 - Health and Behavior

## College of Arts and Sciences

3 credit(s) Irregularly
Psychological theory and research regarding health behaviors; contrasts public health and individual models of behavior initiation, prevention, change; considers implications for living a healthy life.
PREREQ: (PSY 205 OR PSY 209) AND PSY 252

## PSY 392 - Stress and Health

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
An integration of the psychological, social and biological factors linked to the impact of stress on health and well-being and examination of stress management methods.
PREREQ: PSY 205 OR PSY 209

## PSY 393 - Personality

## College of Arts and Sciences

3 credit(s) Every semester
Organization, motivation, and dynamics of human behavior.
PREREQ: PSY 205 OR PSY 209

## PSY 395 - Abnormal Psychology

## College of Arts and Sciences

3 credit(s) Every semester
Abnormal psychology in relation to normal psychology.
PREREQ: PSY 205 OR PSY 209

## PSY 398 - History and Systems of Psychology

## College of Arts and Sciences

3 credit(s) Irregularly
Developments from the 18th through mid-20th centuries, including major systems and leading figures. Designed for psychology majors who plan to apply to graduate school. Permission of instructor.
PREREQ: PSY 205 OR PSY 209

## PSY 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.
PREREQ: PSY 205 OR PSY 209
Repeatable

## PSY 410 - Close Relationships

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Acquaints participants with theory and empirical
research relevant to understanding critical scientific elements of close relationships (initiation, commitment, maintenance, and dissolution), including coverage of evolutionary , attachment, interdependence, and social cognition approaches.
PREREQ: PSY 205 OR 209 AND PSY 274

## PSY 414 - Social Psychology of Conflict and Cooperation

## College of Arts and Sciences

3 credit(s) Every semester Offered only in London. Explores conflict and cooperation through social psychological theories on interaction, group formation, attribution and attitude. Guest lecturers, site visits and independent research provide a European perspective. Introductory social psychology course strongly recommended.
PREREQ: PSY 205 OR PSY 209

## PSY 415 - Introduction to Clinical Psychology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Introduction to the field of clinical psychology. Roles, theories, research methods, evaluation, intervention, ethics, cultural diversity, and areas of specialization which may include health, neuropsychology, forensic psychology, child psychology, and addictions.
PREREQ: PSY 205 OR PSY 209

## PSY 425 - Internships in Clinical Psychology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Faculty supervised internship experiences in mental health, social service, and health care settings. Assessment and intervention strategies for children and adults; report writing skills; professional ethics; stigma and mental illness; overview of mental health professions. Psychology majors only.
PREREQ: PSY 205 OR PSY 209

## PSY 426 - Cognitive Neurochemistry

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: PSY 626
Neurochemical pharmacology and cognitive decline. Organization of neurotransmitter systems in mammalian brain, neurochemical approaches to cognitive disorders, measurement of neurotransmitters in previously frozen rat brain tissue. Additional work required of graduate students.
PREREQ: PSY 205 OR PSY 209

## PSY 431 - Alcohol Use and Abuse

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: PSY 631
Psychological theory and research on alcohol use and the development of abuse and dependence.
Considers controversial topics related to alcohol abuse prevention, regulation, and treatment. Permission of Instructor.
PREREQ: (PSY 205 OR PSY 209) AND (PSY 274 OR PSY 393)

## PSY 432 - Behavioral Analysis in Children

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Principles and strategies of applied behavior analysis as an approach to skill training and behavior management with children and youth. Intended for students who plan to have responsibility for children either professionally or personally.
PREREQ: PSY 205 OR PSY 209

## PSY 437 - Cognition and Aging

College of Arts and Sciences
3 credit(s) Upon sufficient interest
Research and theory on the effects of aging and individual differences on basic cognitive functions, intelligence, wisdom, and cognitive performance in everyday situations.
PREREQ: PSY 337 AND (PSY 205 OR PSY 209)

## PSY 442 - Research Methods in Child Psychology

## College of Arts and Sciences

3 credit(s) Irregularly
Methods used in research in child and adolescent development. Training in design, conduct, analysis, interpretation, and writing of research. Ethical issues.
PREREQ: (PSY 205 OR PSY 209) AND PSY 335

## PSY 443 - Laboratory in Child

Psychology

## College of Arts and Sciences

2 credit(s) Irregularly
Social, cognitive, and personality development.
Design and implementation of research projects.
PREREQ: (PSY 205 OR PSY 209)
COREQ: PSY 442

## PSY 445 - Behavior Disorders in Children

## College of Arts and Sciences

3 credit(s) Every semester
Introduction to developmental and behavioral problems of children and adolescents; review of clinical methods for assessing and treating these
disorders.
PREREQ: (PSY 205 OR PSY 209) AND PSY 335

## PSY 446 - Pediatric Psychology

## College of Arts and Sciences

3 credit(s) Irregularly
Interdisciplinary course addressing physical, cognitive, social, and emotional functioning and development as related to health and illness issues in children, adolescents, and families. PREREQ: (PSY 205 OR PSY 209) AND PSY 335

## PSY 447 - Psychology of Childhood Reading Disorders

## College of Arts and Sciences

3 credit(s) Irregularly
Psychological theory and research on childhood reading disorders. Introduction to language, visual, and neurological factors hypothesized to interfere with reading acquisition. Critique of empirical research related to prevention and intervention techniques.
PREREQ: PSY 205 OR PSY 209

## PSY 450 - Undergraduate Research Program <br> College of Arts and Sciences <br> 1-6 credit(s) <br> Repeatable

## PSY 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
PREREQ: PSY 205 OR PSY 209
Repeatable

## PSY 471 - Experimental Social Psychology

## College of Arts and Sciences

3 credit(s) Irregularly
Research methods in experimental analysis of human social behavior. Training in design, conduct, analysis, interpretation, and writing of research. Ethical issues associated with this research.
PREREQ: (PSY 205 OR PSY 209) AND (PSY 252 AND PSY 274)

## PSY 472 - Laboratory in Social Psychology

## College of Arts and Sciences

2 credit(s) Irregularly
Laboratory studies of social behavior, involving both individual and group performance: impression formation, limitation, cooperation, decision making, and problem solving.

PREREQ: PSY 205 OR PSY 209
COREQ: PSY 471

## PSY 474 - Forensic Psychology

## College of Arts and Sciences

3 credit(s) Irregularly
Psychological aspects of the criminal justice system. Case examples illustrating theory and practice of forensic issues in criminal investigation and courtroom procedures.
PREREQ: PSY 205 OR PSY 209

## PSY 475 - Social Influences on Human Sexual Behavior

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: PSY 675
Theory and research linking social and cultural variables with the sex-related attitudes and behaviors of individuals. Importance of social learning as the major determinant of sexual motivations and variations in sexual preferences. Additional work required of graduate students. Permission of Instructor.
PREREQ: PSY 205 OR PSY 209

## PSY 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
PREREQ: PSY 205 OR PSY 209
Repeatable

## PSY 491 - Research in Clinical/Health Psychology

College of Arts and Sciences
1-6 credit(s) Every semester
Research including the prevention/treatment of alcohol and other substance use disorders, behavioral aspects of HIV/AIDS, religious/ spiritual/psychological aspects of cardiovascular disorders, psychological aspects of tobacco addiction, and stress and coping.
PREREQ: PSY 205 OR PSY 209
Repeatable 5 time(s), 6 credits maximum

## PSY 492 - Research in Cognitive Neuroscience Psychology

## College of Arts and Sciences

1-6 credit(s) Every semester Research including changes in cognitive functioning, information processing, and memory associated with aging; neurobiology of learning; computational neuroscience and quantitative models of cognitive declines.
PREREQ: PSY 205 OR PSY 209

Repeatable 5 time(s), 6 credits maximum

## PSY 493 - Research in Developmental Educational Psychology

College of Arts and Sciences
1-6 credit(s) Every semester
Research including neurological and family factors related to children's health and wellbeing, identification/treatment of children with developmental problems, school-based interventions for children's academic and behavioral problems.
PREREQ: PSY 205 OR PSY 209
Repeatable 5 time(s), 6 credits maximum

## PSY 494 - Research in Social Personality Psychology

## College of Arts and Sciences

1-6 credit(s) Every semester Research including psychological prejudice, social stigma, interpersonal perception, accuracy in impression formation, intergroup relations, motivational aspects of social cognition, gender, social/personality development across the lifespan, and forensic psychology.
PREREQ: PSY 205 OR PSY 209
Repeatable 5 time(s), 6 credits maximum

## PSY 496 - Neuroscience and Society

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: BIO 496
Capstone course offered by the College of Arts \& Sciences for the Integrated Neuroscience major. Learn how to translate your knowledge in neuroscience from laboratory bench to neurological patients' bedside and help problems in society. Permission of instructor.
PREREQ: PSY 205 OR PSY 209

## PSY 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
PREREQ: PSY 205 OR PSY 209
Repeatable 2 time(s), 3 credits maximum

## Queer Sexuality

## QSX 111 - Queer Histories, Communities, and Politics <br> College of Arts and Sciences <br> 3 credit(s)

Explores and analyzes lesbian, gay, bisexual, and transgender histories, communities, and politics from the ancient past to the contemporary, global present through an interdisciplinary reading of research, theory, memoir, biography, fiction, and documentary film.

## QSX 112 - Sexualities, Genders, Bodies

## College of Arts and Sciences

## 3 credit(s)

Explores how lesbian, gay, bisexual, and transgender sexualities, genders, and embodiment are understood across communities and through time, with an interdisciplinary analysis of literature, film, mass media, web sites, research, and theory.

## QSX 300 - Selected Topics

## College of Arts and Sciences

## 1-6 credit(s)

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## QSX 306 - Sexuality in Spain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 306, WGS 306
Offered only in Madrid. Explores important transformations in Spaniards' concepts of sexuality and gender through readings, film screenings and observing certain urban areas in Madrid.

## QSX 348 - Queering the Middle Ages?

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: HST 348
This course introduces students to the models and methods developed in the field of queer theory and applies them to a wide range of medieval texts (letters, novels, monastic rules, medieval historiography, legal texts etc.).

## QSX 357 - Queerly Religious

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: REL 357
Intersections and interactions of religions and sexualities in historical and contemporary contexts. Materials entwine case studies and queer theories. Particular attention given to religious and sexual desires, identities, and enactments.

## QSX 362 - Nazi Germany and the Holocaust

## College of Arts and Sciences

3-4 credit(s) At least $1 x$ fall or spring
Crosslisted with: HST 362, JSP 362
Rise of Nazism, fall of the Weimar Republic, fascist ideology, everyday life under Nazism for "Aryans," Jews, disabled people, Roma, gay people, AfroGermans, others. Planning for genocide, the Holocaust, reactions and memories after 1945.

## QSX 384 - Sexuality and the Law

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: PSC 384
Examines politically significant legal debates regarding gender and sexuality. Issues covered may include privacy rights, discrimination on the basis of sexual orientation and gender identity, family law and parental rights, and same-sex marriage.

## QSX 389 - LGBT History

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: HST 389, WGS 389
The history of lesbian, gay, bisexual, transgender experience in period and region (North America, Europe, or Global) of instructor's expertise, with attention to the international context..

## QSX 400 - Selected Topics: Queer Sexuality

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## QSX 437 - LGBTQ Health and Well Being

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: HTW 437, SWK 437
Application of concepts from an ecological framework to understand the micro, mezzo, macro, and social forces that impact the health and wellbeing of lesbian, gay, bisexual, transgender and queer populations.

## QSX 438 - Trans Genders and Sexualities

## College of Arts and Sciences

3 credit(s)
Crosslisted with: WGS 438
Examines normative and non-normative genders/ sexualities. Focuses on embodiment, desire, and identity. Examines relation between individual and collective subjectivities and politics. Foregrounds transnational and decolonial challenges to categories such as man/woman, lesbian/gay, straight/queer, transgender, transsexual..

## QSX 447 - Sexualities and Genders in World Teen Culture

## College of Arts and Sciences

3 credit(s)
Crosslisted with: WGS 447
How teenagers in both U.S. and non-U.S.
cultures are transforming their genders and sexual identities in response to the women's and lesbian/gay/bisexual/transgender liberation movements.

## QSX 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: MES 453, WGS 453
Focuses on the centrality of gender and sexuality to the politics of everyday life by mapping women's rights movements, LGBT Mobilizations, and minority activisms in the Middle East.

## QSX 456 - LGBT Studies in Sociology

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 456, WGS 456
Recent sociological research in lesbian, gay, bisexual, and transgender studies addressing sexuality, identity, community, representation, politics, social change and their inter-relations.

## Religion

## REL 100 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## REL 101 - Religions of the World

College of Arts and Sciences
3 credit(s) At least 1x fall or spring The nature and significance of religion within human culture and existence as evidenced in various religions of the world both past and present.

## REL 102 - Religion Today in a Globalizing World

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5 Consideration of the globalization of religions and the rise of worldwide trends: spirituality, fundamentalism, new religious movements, and major changes in established religions.

## REL 103 - Religion and Sports

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring The religious/ceremonial origins of sports; importance of sports in human culture; issues of identity, gender, race, ethnicity as defined by sports. Special emphasis on lacrosse.

## REL 104 - Religion and Science

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Historical and conceptual overview of the relations of religions and science in Christian and Islamic cultures. Engagement with current high profile debates, e.g. evolution and stem cell research.

## REL 106 - What Is Belief?

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Interdisciplinary exploration of belief as religious and cultural phenomena. Readings from historical, philosophical, religious, scientific, and literary sources.

## REL 107 - Religion, Literature, Film

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 107
Literary and cinematic approaches to religious life, focusing on Jewish and Christian communities. Special attention to the Bible, Yiddish culture, post-Holocaust writing, and Israel; topics include land, tradition, humor, science, and violence.

## REL 114 - The Bible

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: JSP 114
Jewish and Christian scriptures in their ancient Near Eastern and Hellenistic contexts, with particular attention to their literary forms, the history of their composition, and their role in the development of Western religions and cultures. Credit is not given for REL/JSP 114 and either REL/JSP 215 or REL 217.

## REL 120 - Introduction to the Study of Religion

## College of Arts and Sciences

3 credit(s) Irregularly
Introduces students to the academic study of religion as a complex field given shape through a diversity of academic disciplines and questions.
Terms, concepts, and ideas will be discussed.

## REL 121 - Pilgrimage

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 A cross-cultural exploration of religious journeys, including pilgrim's travels through different landscapes as well as spiritual quests. Buddhist, Christian, Hindu, Muslim and indigenous traditions are regularly included.

[^9]Crosslisted with: SAS 123
A cross-cultural exploration of religious autobiographies. Understanding multiple dimensions of religious life through narratives of the self, the sacred, and society.

## REL 125 - Religion and Sexuality

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Roles and significances of sexuality in religious traditions. Mutual influences of religions and sexualities. Case studies from multiple traditions and locations. Attention to intersections of religious and sexual identities and practices.

## REL 126 - Ecstasy, Transgression, Religion

## College of Arts and Sciences

3 credit(s) Upon sufficient interest An exploration of ecstasy and transgression as limit-cases for religion. Topics may include mysticism, madness, eroticism, passion, and sacrifice.

## REL 131 - Great Jewish Writers

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: JSP 131, LIT 131
Introduction to fiction by Jewish authors. Topics include modernization, rebellion against authority, alienation, childhood, superstition, and the holocaust. Some films included.

## REL 135 - Judaism

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: JSP 135
Survey of Judaic ideas, values, and cultural expressions as found in biblical, talmudic, medieval, mystical, and modern texts.

## REL 142 - Native American Religion

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring
Crosslisted with: NAT 142
Religious beliefs and practices of native Americans; the diversity as well as similarity of religious expression.

## REL 156 - Christianity

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Christianity's institutional forms, sacred writings, ideas and beliefs, worship practices, cultural and creative expressions, ethical and political roles in society, from antiquity to the present. How Christianity addresses human needs, concerns, and desires.

## REL 165 - Discovering Islam

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: MES 165, SAS 165
Islam as a faith and a civilization. Understanding its origins, beliefs, rituals, and the historical development of its intellectual traditions in the pre-modern and modern eras, and its geographic, cultural and theological diversity today.

## REL 185 - Hinduism

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: SAS 185
Religious life of contemporary Hindus in India: gods, goddesses, and other divines; worship; sectarian movements; and rituals in the home, at temples, and at other holy sites.

## REL 186 - Buddhism

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: SAS 186
Buddhism as a world religion: its origin in India, its spread to other parts of Asia, and consequent changes in doctrine and practice through the ages.

## REL 191 - Religion, Meaning and Knowledge

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Exploration of the age-old quest for meaning, knowledge and faith in the face of suffering and loss through art, philosophy, music and literature.

## REL 200 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## REL 205 - Ancient Greek Religion

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Historical and systematic studies of Greek myth and cult (pre-Homeric Chthonic religion through Olympian polytheism to the decline of the polis). Interaction of religion with drama, art, architecture, philosophy, and politics.

## REL 206 - Greco-Roman Religion

College of Arts and Sciences
3 credit(s) Irregularly
Various aspects of religious thought and experience in the Greco-Roman world. Variety of ways in which Greco-Roman people expressed
the human situation, constructed their world, and viewed salvation through myth, symbol, and ritual.

## REL 215 - The Hebrew Bible

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 215
The Hebrew Bible (often called Old Testament) in English translation, with particular attention to its literary form, its cultural context in the ancient Near East, the history of its development, and its role in Western religions and cultures. Credit is not given for REL/JSP 114 and either REL/JSP 215 or REL 217.

## REL 217 - The New Testament

## College of Arts and Sciences

3 credit(s) Irregularly
Historical, literary, theological, and cultural dimensions of selected documents comprising the New Testament. Credit is not given for REL/JSP 114 and either REL/JSP 215 or REL 217.

## REL 221 - Morality and Community

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: ANT 221
Examines how globally diverse religious groups create distinct moral systems in order to provide their members with the feeling of belonging to unique and meaningful communities.

## REL 223 - Faith, Doubt, and Fanaticism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Contemporary, existential introduction to
academic study of religion through critical consideration of religious and secular extremisms.

## REL 227 - Gods: A Cross-Cultural Gallery

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Study of Gods in a cross-cultural context
accenting forms of Gods perceived and experienced in embodied, visible, concrete form rather than as "transcendent" or "spirit."

## REL 231 - Jewish Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: JSP 231, LIT 231
Survey of major works in the Jewish tradition, including Hebrew and Yiddish prose in translation. Themes include nature, culture, exile, humor, satire, and talking takhlis.

## REL 235 - Travel Narratives and Pilgrimages

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: JSP 235, LIT 235
Study of secular and spiritual travel narratives, both factual and fictional. Included are tales of exploration, shipwreck, and pilgrimage to the Holy Land, which played a key role in literary history.

## REL 241 - Religious Diversity in America

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Emergence of United States as unique, multi-faith society, with focus on Christianity, Judaism, Islam, Buddhism, Hinduism, and other faiths.

## REL 242 - Religious Issues in American Life

## College of Arts and Sciences

3 credit(s)
How contemporary religious ideas, individuals, and organizations intersect with major political and cultural issues in the United States.

## REL 244 - Indigenous Religions

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: ANT 273, NAT 244
The connections between material life and religious life in cultures throughout the world. The diverse ways that various cultures inhabit their landscapes.

## REL 246 - Religion and Popular Culture

College of Arts and Sciences
3 credit(s) Irregularly
Popular expressions of religion in and through cemeteries, holidays, music, film, media and sports.

## REL 252 - Ethical Decision Making

## College of Arts and Sciences

3 credit(s) Irregularly
Ethical reflection and choice about selected moral dilemmas commonly encountered in contemporary life. Credit cannot be given for both PHI 398 and REL 252.

## REL 255 - Depth Psychology and Religious Ethics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Theories of human nature and their implications for religion and ethics. Includes narcissism, religious experience, moral conscience, mutuality, and the commandment to love thy neighbor as thyself.

## REL 261 - Faith and Reason in Islamic Thought and Civilization

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Understanding the key themes and historical development of the Islamic intellectual tradition by examining the tension between dogmatic faith and rational interpretation in Islamic theology, law, philosophy and mysticism.

## REL 281 - African Religions: An Introduction

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: AAS 241
Historical and comparative study of religious practice in Africa. Diversity of traditional beliefs, developments in Christianity and Islam, and political significance of religious identity and practice. African influence on western religious practices.

## REL 283 - India's Religious Worlds

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: SAS 283
Inter-secting religious worlds of Hindus, Muslims, Sikhs, Jains, and Christians in modern India; focus on cosmology and morality in interaction with ritual practices, religious narratives, social life, media, and politics.

## REL 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## REL 291 - Comparative Themes and Issues

## College of Arts and Sciences

3 credit(s) Irregularly
Special introductory thematic studies of religion, or of the study of religion. Themes and issues addressed may vary, but will generally feature the nature of religion itself, or the discipline of religious studies.

## REL 292 - The Human and Divine in Christian and Muslim Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 241
An investigation of the complex relationship between humanity and divinity and its implication for the formation of Christian and Islamic
philosophy and theology.

## REL 294 - Mythologies

## College of Arts and Sciences

3 credit(s) Irregularly
Mythologies of the world, ancient and modern, Eastern and Western, Northern and Southern. Issues of nature and function, historical development and diffusion of myth.

## REL 295 - Religion And Art

## College of Arts and Sciences

3 credit(s) Irregularly
Relationship between art, religion, and religious thought. May draw on classical religious sources, art history, literature, theology, or philosophy. Emphasis placed on Western religious/artistic traditions (Judaism, Christianity).

## REL 300 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## REL 301 - Ancient Near Eastern Religions and Cultures

College of Arts and Sciences
3 credit(s) Irregularly
The social contexts of ancient religious ideas and practices. Texts, art, and other artifacts from ancient Mesopotamia, Egypt, Syria, Palestine, and Israel.

## REL 307 - The Temple and the Dead Sea Scrolls

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: JSP 307
History and literature of Second Temple Judaism including the canonization of scripture, origins of the synagogue, apocalyptic literature, the Dead Sea Scrolls, and other developments leading to early Christianity and rabbinic Judaism.

## REL 308 - Ancient Judaism and the Origins of Christianity

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: JSP 308, MES 308
Offered only in Madrid. Social, cultural, intellectual, and historical conditions which surrounded the birth of this new world religion in its ancient Mediterranean cradle--from Mesopotamia and Egypt to Greece and ancient Rome.

## REL 309 - Early Christianities

College of Arts and Sciences
3 credit(s) Irregularly
The emergence of Christianity as a distinct religion within the Roman empire; the diversity of early Christian beliefs and practices.

## REL 310 - Medieval Christianities

College of Arts and Sciences
3 credit(s) Every semester
Diverse ways of experiencing medieval European Christian beliefs and practices. Particular attention given to monks, mendicants, and mystics and to topics including humanity and divinity, love and knowledge.

## REL 311 - The Bible as Literature

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 311
A study of one literary genre (such as prose narrative, didactic poetry, or hymnody) through the books of the Hebrew Bible in comparison to other ancient literatures.

## REL 316 - The Torah/Pentateuch as a Scripture

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: JSP 316
How the Pentateuch became the Torah, the first Jewish scripture: its origins, rhetorical use, performance in various media, and ritual function as an iconic book.

## REL 320 - Religion and Culture

## College of Arts and Sciences

3 credit(s) Every semester
Religion as an expression of culture and also as a force that contributes to the formation of culture. Approaches and topics vary.
Repeatable 2 time(s), 9 credits maximum

## REL 321 - Christians, Jews and Muslims

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HUM 321, JSP 321, MES 321 Offered only in Madrid. Key historic encounters between the three versions of monotheism, with reference to the richness of past cultural and religious legacy rooted in the Mediterranean region.

## REL 324 - Religions and Storytelling

College of Arts and Sciences
3 credit(s) Irregularly
Religious teachings in narrative form. Traditions include Hindu, Muslim, Jewish, Christian,

African, and Native American religions. Topics include saints, miracles, gender, nature, identity, resistance, empowerment.

## REL 326 - Religion and Film

## College of Arts and Sciences

3 credit(s) Irregularly
Readings in religion and film theory to examine how film-makers employ, construct, and presume particular understandings of the religious. Film viewing outside regular classroom time.

## REL 331 - European and American Jewish Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: JSP 331
Readings of 20th-century fiction and drama, focusing on works by Schnitzler, Kafka, Wiesel, P. Levi, Yezierska, H. Roth, I.B. Singer, Malamud, P. Roth, and Ozick.

## REL 332 - Jewish Textual Tradition

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: JSP 332
Students explore the Jewish textual tradition. Topics vary from year to year. Texts include Talmud, midrash, medieval philosophy and mysticism. Course can be repeated for credit.
Repeatable 2 time(s), 9 credits maximum

## REL 333 - Yiddish Literature in Translation

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: JSP 333, LIT 333
Survey of Yiddish literature, with special attention to the classic Yiddish authors, Yiddish theater, modernism, and Yiddish women writers. Themes of minority culture, class struggle, hasidism, and the decline of the Shtetl.

## REL 334 - Modern Judaism

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: JSP 334
The impact of modernity on Jewish life and thought. Issues and themes vary.

## REL 335 - Israeli Literature and Culture

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: JSP 335, LIT 335, MES 335
Literary and cultural approach to the modern
history of Israel, with special attention to conflicts that have arisen during the Zionist project.

REL 337 - Shoah: Responding to the Holocaust

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 337
Historical, literary, and philosophical representations of, and responses to, the Nazi genocide. Philosophical, theological, and ethical challenges raised by the Holocaust.

## REL 338 - American Judaism

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 338
Students explore the relation between culture and religion across a diverse range of American Jews and Jewish communities. Particular attention is paid to the process of acculturation and assimilation and to the reinvention of Judaism.

## REL 341 - Women, Abolition, and Religion in 19th Century America

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 387, WGS 341
The role that religion may have played in women's understandings of themselves as abolitionists and social reformers. A selected group of women will be studied, with considerable attention given to Frances Harper.

## REL 342 - Religion and Politics in the Israeli-Palestinian Conflict

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: JSP 342, MES 342, PSC 342
Considers the extent to which religion matters in an enduring ethno-nationalist conflict.
Approaches the Israeli-Palestinian conflict from an interdisciplinary perspective that explores the intersection of religion and politics.

## REL 343 - American Religions and the News Media

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Examines spiritual complexity of the U.S.; explores relationship between media and organized religion.

## REL 345 - African American Religious History

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 345
Historical significance of religion for Americans of African descent. African and western forces shaping religious identity. Religious practices, beliefs, organizations, imagery, literature, theories,
and activism. Historical perspectives on meanings of religion.

## REL 347 - Religion and the Conquest of America

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 347
The development of America through the contact between indigenous and colonial people's divergent religious understandings of land.

## REL 348 - Religion and American Consumerism

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 348
Interrogates the relationship of American religious and economic practices, as compared with Native American traditions, during the 19th and 20th centuries.

## REL 351 - Theorizing Religion, Culture, Theology

## College of Arts and Sciences

3 credit(s) Irregularly
Contemporary and theoretical understandings of the meanings of religious, cultural, and theological discourse.

## REL 352 - Sociology of Religion and Morals

## College of Arts and Sciences

3 credit(s) Irregularly
Sociological interpretations of religion and morality. Classical writings of Emile Durkheim and Max Weber and contemporary sociologists. The sacred, ritual, community, secularization, social change, and justice.

## REL 353 - Religion and Nature

## College of Arts and Sciences

3 credit(s) Irregularly
American nature writing is examined for its religious structure, terminology, and effects.

## REL 354 - Kierkegaard and Nietzsche

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PHI 354
This course focuses on the similarities and differences of Kierkegaard's and Nietzsche's views on selfhood, society, and religion.

## REL 355 - Religion, Identity and Power

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PSC 362, SOC 362
Examines ascendancy of religious movements;
prominence of religious ideas; secularization and religion as a political force; conceptual and historical issues in relation to religious ideas and movements, including various Islamic revivals and the Christian right. Offered in London and Madrid only.

## REL 356 - Religion and Conflicts in Contemporary Europe

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: PSC 456
Offered only in Strasbourg. Examines continent's long history of religious conflict, especially ways in which local and global religious tensions have developed in recent years.

## REL 357 - Queerly Religious

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: QSX 357
Intersections and interactions of religions and sexualities in historical and contemporary contexts. Materials entwine case studies and queer theories. Particular attention given to religious and sexual desires, identities, and enactments.

## REL 358 - Critical Issues in Religious Thought

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Introduction to religious thought through a philosophical inquiry into theological problems in both Western and Eastern religions. Epistemological, metaphysical, and axiological issues.

## REL 359 - Stem Cells and Society

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: BIO 396, PHI 396
The science of stem cells and the philosophical, religious and legal complexities surrounding the research and use of stem cell technologies.

## REL 362 - Islamism and Islamist Movements Today

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: MES 392, PSC 392
A study of the historical, religious, social and political origins of Islamism and Islamist movements around the world today.

## REL 364 - Enchanting Words: Muslim

 Poets, Singers and StorytellersCollege of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: MES 364, SAS 364

Understand the power of words and language in Muslim cultures expressed in oral and literary genres including poetry, humor, fables, folksongs and travel journals. Explore key themes such as virtue, reality, divine and human nature.

## REL 367 - God and Beauty in Islamic Art

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: MES 365, SAS 367
Expressions of beauty, creativity and faith in Islamic calligraphy, ceramics, textiles, architecture, miniatures and music. Unity and diversity of the visual and performing arts of Muslims in different periods, cultures and regions.

## REL 371 - God in Political Theory

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 319, PSC 399
An exploration of the key approaches to the relationship between the idea of God and religion and politics in political theory and philosophy.

## REL 375 - Religion and Ethics in PostFreudian Depth Psychologies

## College of Arts and Sciences

3 credit(s) Irregularly
Psychoanalytic theories after Freud and their contributions to understanding religious phenomena and the moral life.

## REL 384 - Goddesses, Women and Power in Hinduism

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: SAS 384, WGS 384
Interrelationship of power as female and female power in Hindu cosmology, mythology, and society. Complexities of mythic, domestic, and economic gender hierarchies.

## REL 385 - Religion in Chinese Society

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Surveys the diversity of religious practice in mainland China and Taiwan focusing on the lived experiences of ordinary adherents both within institutionalized religions and through localized folk beliefs and practices.

## REL 386 - Studies in Buddhism

## College of Arts and Sciences

3 credit(s) Irregularly
Selected topics in the thought and practice of Buddhism.
Repeatable 2 time(s), 9 credits maximum

## REL 387 - Religious Belief Systems in Everyday Asian Life

## College of Arts and Sciences

3 credit(s) Every semester Offered only in Hong Kong. Examines world views, value systems, and theories of major Asian religions and belief systems and their contributions to the formation of Asian culture.

## REL 391 - Advanced Religion Seminar

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Content may vary, attention always given to diversity of theories and methods in study of religion. Required of all religion majors. Open to others by special permission. Junior or Senior status.

## REL 392 - Music and the Sacred

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: HOM 492
Intersection of music and the sacred in a variety of cultural traditions and historical periods.

## REL 393 - Extreme Religion

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Exploration of religious experiences at human limits and of religion as a limit discourse. Limits explored include rationality, language, sexuality, humanity, and mortality.

## REL 394 - Sources of the Self: Finding the "I" in Religion \& Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 342
An exploration of major conceptions of the self, personal identity and human nature in philosophical and religious traditions.

## REL 395 - Religions and the Natural Environment

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Interpretations of the natural environment in the mythologies, rituals, and practices of religious traditions, including religious responses to current ecological crises.

## REL 396 - Mysticism

College of Arts and Sciences
3 credit(s) Irregularly
Diverse manifestations of mysticism; historical case studies from various religious traditions. Insights of theologians and depth psychologists.

## REL 400 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## REL 409 - A History of Witchcraft

## College of Arts and Sciences

3 credit(s)
Crosslisted with: ANT 409, HST 409, WGS 409
History of witchcraft from various perspectives: its intellectual roots, the causes and dynamics of the witch-hunt, and the beliefs and self-perceptions of those who were called "witches". Offered only in Florence.

## REL 421 - Classical Mythology

College of Arts and Sciences
3 credit(s)
Crosslisted with: CLA 421, LIT 421
Myths and rituals of Greek mythology and religion. Ancient poets/playwrights and important mythological themes found in later Western religious/artistic traditions. Offered only in Florence.

## REL 435 - Modern Jewish Thought

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: JSP 435, PHI 435
The philosophical implications of Judaism's encounter with modernity. Close readings of selected modern Jewish thinkers. Issues and figures vary.
Repeatable 3 time(s), 9 credits maximum

## REL 439 - Jewish Studies Seminar

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: JSP 439
Interdisciplinary study of special topics in the Jewish tradition.
Repeatable 2 time(s), 9 credits maximum

## REL 440 - Modern Religious Thought

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Examines conceptions of human being in modern religious thought in Europe and America. Themes may include God and the self; God, art, and delight; and religion and despair. Figures examined may include Kierkegaard, Douglass, Dostoevsky, Dinesen, and Baldwin.
Repeatable 1 time(s), 6 credits maximum

## REL 449 - Religious Dimensions of Whiteness

## College of Arts and Sciences

3 credit(s) Irregularly
Examines the creation and use of "whiteness" as a religious dimension in the formation of American identity.

## REL 451 - Visual Culture Past and Present: Gender, Religion and Politics

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: CRS 451, HST 451, WGS 451 Offered only in Florence. Contemporary visual culture; its representation of gender, religion, and politics and the origins of that representation in a pictorial language first codified in Italy and Europe between circa 1450 and 1650.

## REL 461 - Enlightenment: Between European West and Islam

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 427
The course examines the common view that Enlightenment and Modernity started in the West, revealing their roots in Islamic thought and philosophy and considers how the two traditions converge and/or diverge.

## REL 465 - Beyond the Veil: Gender Politics in Islam

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: MES 465, SAS 465, WGS 465
Double Numbered with: REL 626
Politics of gender, religious identities, and resistance in the Islamic world. Gender scripts in Qur'anic scripture and Shariah laws. Contemporary realities of Muslim women living in different parts of the world. Additional work required of graduate students.

## REL 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## REL 471 - Religion and Society in Brazil

## College of Arts and Sciences

3-4 credit(s)
Crosslisted with: ANT 471
Role of religion in society; religions of Brazil, including Catholicism, liberation theology, afro-
religions. Spring break field stay in Rio de Janeiro; methods of study; preparation of research proposal.

## REL 487 - Global Hinduism

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: REL 687 Exploring how mobile middle-class Hindus recreate and re-define religion in new urban and global environments as a context for rethinking the place of religion(s) within rapid world-wide urbanization, migration, globalization, and increasing cultural (dis)integration. Additional work required of graduate students.

## REL 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## REL 498 - Thesis Preparation

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Departmental distinction for majors who demonstrate exceptional achievement in the study of religion.

## REL 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## REL 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## REL 551 - Ethics and the Health professions

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PHI 593
Ethical theories in professional, organizational, and political-economic fields in health care. Specific issues: assisted suicide, professional codes, ethics of "cost- cutting" and justice with respect to care.

## REL 552 - Bioethics

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: PHI 594
Use of ethical theory in thinking about case problems in health care. Moral dilemmas: use of reproductive technologies, abortion, surrogate motherhood, research with humans, refusal and withdrawal of treatment, physician-assisted suicide.

## REL 557 - Modern Theology

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Introduction to major figures and movements in twentieth- century theology. Upper division standing.

## REL 595 - Religion, Art, and Aesthetics

College of Arts and Sciences
3 credit(s) Irregularly
Intersection between religion, art, and philosophy. Sources culled from Western religious thought and philosophy.

## Russian

## RUS 101 - Russian I

College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Russian. No prior experience or admission by placement testing. Students cannot enroll in RUS 101 after earning credit for RUS 102, RUS 201, RUS 202, or higher. PREREQ: REQUIRED PLACEMENT EXAM SCORE

## RUS 102 - Russian II

College of Arts and Sciences
4 credit(s) Every semester
Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, in culturally authentic contexts. Activities are conducted in Russian. Students cannot enroll in RUS 102 after earning credit for RUS 201, RUS 202, or higher.
PREREQ: RUS 101

## RUS 201 - Russian III

College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Russian. Students cannot enroll in RUS 201 after earning credit for RUS 202 or higher.
PREREQ: RUS 102

## RUS 202 - Russian IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Russian. Students cannot enroll in RUS 202 after earning credit for a course higher than RUS 202.
PREREQ: RUS 201

## RUS 301 - Reading and Composition

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Reading, comprehension, oral and written composition, structure, and usage at the advanced intermediate level.

## RUS 302 - Reading and Composition

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Reading, comprehension, oral and written composition, structure, and usage at the advanced intermediate level.

## RUS 320 - Contemporary Russian Media

## College of Arts and Sciences

3 credit(s) Irregularly
Using contemporary newspapers, journals, web sites, news broadcasts, and video segments, this course will teach the development of fundamental reading/translation and aural/oral skills.
PREREQ: RUS 202
Repeatable

## RUS 331 - Russian Culture Through Fiction and Film

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LIT 331
Documentary films and readings of short fiction. Elements of Russian culture and provides an understanding of Russian national identity as it has developed from Kievan Russian to the present day.
PREREQ: RUS 202

## RUS 332 - Russian Fairy Tales and Folklore

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LIT 332
The history and development of fairy tales in Russia. Begins with oral tales, influenced by early folklore and pagan rituals, and progresses through literary fairy tales and film versions.
PREREQ: RUS 201

## RUS 351 - Introduction to Russian Literature

College of Arts and Sciences
3 credit(s) Irregularly
Masterpieces of Russian literature. Conducted in Russian.

## RUS 352 - Introduction to Russian Literature

## College of Arts and Sciences

3 credit(s) Irregularly
Masterpieces of Russian literature. Conducted in Russian.

## RUS 361 - Russian Literary Film Adaptations

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: LIT 361
Study of film adaptations of Russian literary classics.
PREREQ: RUS 202

## RUS 362 - Russia Today

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LIT 362
Using scholarly texts, newspapers, blogs, digital audio, film, recent literature, and web videos, we will investigate topics that define contemporary Russia and make it seem familiar yet different to us in the West.
PREREQ: RUS 201

## RUS 405 - Advanced Structure and Usage

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Practice in idiomatic usage, analysis of syntax, phonology, morphology. Required of Russian majors.
PREREQ: RUS 301 AND RUS 302

## RUS 412 - Political Russian

## College of Arts and Sciences

3 credit(s) Irregularly
Expand vocabulary and grammatical skills to permit the student to carry on more complex conversation in authentic situations, express opinion, argue and hypothesize. Acquire essential knowledge of contemporary Russian society, history and culture.
PREREQ: RUS 302

## RUS 422 - Business Russian

## College of Arts and Sciences

3 credit(s) Irregularly
Learn common business vocabulary, practice conversation and conduct research on business
related topics. Further develop the basic skills and knowledge of Russian business language and culture introduced earlier in different courses. PREREQ: RUS 302

## RUS 490 - Independent Study

College of Arts and Sciences
1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## RUS 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## South Asian Studies

## SAS 101 - Hindi/Urdu I

College of Arts and Sciences
4 credit(s) At least 1x fall or spring Crosslisted with: HIN 101
Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 101 after earning credit for HIN/SAS 102, HIN/SAS 201, HIN/SAS 202, or higher.

## SAS 102 - Hindi/Urdu II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Crosslisted with: HIN 102
Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 102 after earning credit for HIN/SAS 201, HIN/ SAS 202, or higher.
PREREQ: HIN 101

## SAS 123 - Religious Auto/Biography

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 123
A cross-cultural exploration of religious autobiographies. Understanding multiple dimensions of religious life through narratives of the self, the sacred, and society.

## SAS 165 - Discovering Islam

College of Arts and Sciences
3 credit(s) At least 1x fall or spring

Crosslisted with: MES 165, REL 165
Islam as a faith and a civilization. Understanding its origins, beliefs, rituals, and the historical development of its intellectual traditions in the pre-modern and modern eras, and its geographic, cultural and theological diversity today.

## SAS 185 - Hinduism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: REL 185
Religious life of contemporary Hindus in India: gods, goddesses, and other divines; worship; sectarian movements; and rituals in the home, at temples, and at other holy sites.

## SAS 186 - Buddhism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: REL 186
Buddhism as a world religion: its origin in India, its spread to other parts of Asia, and consequent changes in doctrine and practice through the ages.

## SAS 201 - Hindi/Urdu III

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Crosslisted with: HIN 201
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 201 after earning credit for HIN/SAS 202 or higher.
PREREQ: HIN 102

## SAS 202 - Hindi/Urdu IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Crosslisted with: HIN 202
Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Hindi/Urdu. Students cannot enroll in HIN/SAS 202 after earning credit for a course higher than HIN/SAS 202.
PREREQ: HIN 201

## SAS 283 - India's Religious Worlds

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: REL 283
Inter-secting religious worlds of Hindus, Muslims, Sikhs, Jains, and Christians in modern India; focus on cosmology and morality in interaction with ritual practices, religious narratives, social life, media, and politics.

## SAS 301 - Contemporary Asian Americans

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: SOC 301
An overview of the Asian American experience.

## SAS 324 - Modern South Asian Cultures

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: ANT 324, WGS 324
Societies of India, Pakistan, Bangladesh, and Sri Lanka. Social organization, economic and political structures, religions and world view, survey of languages, the arts. Transition and modernization, rural and urban problems.

## SAS 328 - Ancient and Medieval India

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 328 Formation of traditional Indian kinship, religion, philosophy, and culture. Vedic society and the rise of Buddhism. Medieval Hindu kingdoms. Expansion and the legacy of Islam. Rise and disintegration of the Mughal empire.

## SAS 329 - Making of Modern India

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: HST 329
British colonial expansion in India. Emergence of nationalism and related movements of religious, social, and cultural reform. Gandhi and nonviolence. Struggle for independence and the politics of gender, class, caste, and religious community.

## SAS 364 - Enchanting Words: Muslim Poets, Singers and Storytellers

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: MES 364, REL 364
Understand the power of words and language in Muslim cultures expressed in oral and literary genres including poetry, humor, fables, folksongs and travel journals. Explore key themes such as virtue, reality, divine and human nature.

## SAS 367 - God and Beauty in Islamic Art

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: MES 365, REL 367
Expressions of beauty, creativity and faith in Islamic calligraphy, ceramics, textiles, architecture, miniatures and music. Unity and diversity of the visual and performing arts of Muslims in different
periods, cultures and regions.

## SAS 375 - British Empire

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Crosslisted with: HST 375 Seminar on expansion of the British Empire (emphasis on India and Africa) in the 18th and 19th centuries. Explores histories of conquest, administration and imperial policy, and the ideologies of imperialism and colonialism.

## SAS 384 - Goddesses, Women and Power in Hinduism

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: REL 384, WGS 384
Interrelationship of power as female and female power in Hindu cosmology, mythology, and society. Complexities of mythic, domestic, and economic gender hierarchies.

## SAS 385 - Music and Dance of India

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: HOM 384
Selected music and dance traditions of India in their cultural, historical, and performative contexts, representing classical, devotional, folk, tribal, and popular arts. Performance as a window into Indian culture, society, and modernization.

## SAS 386 - Sounds of the Silk Road

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HOM 386, MES 386
The soundscapes of the overland Silk Road as a window into history, commerce, migration, social life, values, faith, tolerance and conflict. Case studies from Turkish, Arabic, Persian, Central Asia, and Southwest Asia musics.

## SAS 389 - Politics of India

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 389
Introduction to politics in post-independence India. Surveys India's party system, institutional structures, political practices and socio-economic policies. Examines the reasons for India's democratic stability despite high levels of illiteracy, poverty and ethnic heterogeneity.

## SAS 394 - Partition of India in Film

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: HST 394
Explores the partition of India in 1947 through South Asian films.

## SAS 396 - Art and Architecture of India

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: ARC 331, HOA 396
Art and architecture of the Indian subcontinent from the Indus Valley Civilization to the present.

## SAS 400 - Selected Topics:South Asian Studies

## College of Arts and Sciences

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SAS 421 - Gender \& Sexuality in South Asia

College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: ANT 421
Double Numbered with: SAS 622
Seminar examines gender and sexuality in South Asia through ethnographies and films. Topics explored relating to gender and sexuality include: colonialism; nationalism; development; globalization; kinship; the life cycle; caste and class; religion; same-sex/"third sex" identities. Additional work required of graduate students.

## SAS 426 - Cultures and Politics of Afghanistan and Pakistan

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: ANT 426, IRP 426
Double Numbered with: SAS 626 Introduction to Afghanistan and Pakistan, recent histories, cultures, current politics. Covers geography, religious systems, gender roles, economic systems, foreign policy issues, refugees, migration. Additional work required of graduate students.

## SAS 465 - Beyond the Veil: Gender Politics in Islam

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: MES 465, REL 465, WGS 465
Politics of gender, religious identities, and resistance in the Islamic world. Gender scripts in Qur'anic scripture and Shariah laws. Contemporary realities of Muslim women living in different parts of the world. Additional work required of graduate students.

## Science Teaching

## SCI 104 - Science-Questions and Quests: Physical Phenomena I

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Science for non-science majors seeking to explain curious events through laboratory experiences and study of motion, gravity, machines, energy, and properties of matter.

## SCI 105 - Science-Questions and Quests: Physical Phenomena II

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Science for non-science majors seeking to explain curious events through laboratory experience and study of heat, sound, electricity and magnetism, light, chemistry, and astronomy.

## SCI 544 - Teaching of College Science

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Current approaches. Analysis of teaching methods, such as lectures, discussions, evaluation, use of institutional technology, individualized instruction. Supervised teaching experiences to aid self-improvement as a college science teacher.

## Sociology

## SOC 101 - Introduction to Sociology

## College of Arts and Sciences

3 credit(s) Every semester Principal concepts, methods, and findings in sociology. Societal structures, processes, institutions, and social roles from both macroand microanalytic human behavior perspectives.

## SOC 102 - Social Problems

## College of Arts and Sciences

3 credit(s) Every semester Application of sociological theory and methods to identification, description, and analysis of contemporary social problems. Critique and analysis of alternative strategies for social change.

## SOC 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SOC 230 - Intergroup Dialogue

## College of Arts and Sciences

3 credit(s)
Crosslisted with: WGS 230
Guided intergroup communication skills. Cycle
of socialization; social identities, and social structures that create and maintain inequality; power of dynamic of racism, sexism, and other systems of oppression. Students explore conflict and enact collaboration to deepen understanding. Repeatable 1 time(s), 6 credits maximum

## SOC 248 - Ethnic Inequalities and Intergroup Relations

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: WGS 248
Identification of individuals and groups by self and others as members of ethnic categories. Consequences of ethnic identifications for individual, group, and societal interaction. Emphasizing ethnic inequalities, group interactions, social movements and change, racism, prejudice, and discrimination.

## SOC 254 - Comparative Study of

 American Ethnic Communities
## College of Arts and Sciences

3 credit(s) Upon sufficient interest Crosslisted with: AAS 254
Variety of ethnic communities in American society. Comparative analysis of similarities and uniqueness. Issues of group conflict, diversity, and unity.

## SOC 281 - Sociology of Families

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: WGS 281
Families and their connections to other social and economic institutions. Diversity of family forms and experiences. Formation and dissolution of relationships. Trends and changes.

## SOC 300 - Selected Topics

College of Arts and Sciences
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

SOC 301 - Contemporary Asian Americans

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: SAS 301
An overview of the Asian American experience.

## SOC 305-Sociology of Sex and Gender <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Crosslisted with: WGS 305 <br> Social forces shaping women's and men's lives

in contemporary societies. Changing gender expectations. Intersections of gender with race and ethnicity, class, and age. Social movements for women's and men's liberation.

## SOC 306 - Sexuality in Spain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: QSX 306, WGS 306
Offered only in Madrid. Explores important transformations in Spaniards' concepts of sexuality and gender through readings, film screenings and observing certain urban areas in Madrid.

## SOC 307-Asian Americans and Social Stratification

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: AAA 307
Designed to familiarize the student with major issues and potential controversies in the scholarly studies as well as public perceptions of Asian American experiences in education and work.

## SOC 309 - Race, Gender and Sexuality in the African Diaspora

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: AAS 309, WGS 309
To introduce students to the reality of how institutional racism informs the "common sense" understanding of what is known as Black sexuality.

## SOC 312 - The Pale and Beyond

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: PSC 432
Field studies seminar based in Dublin and Belfast, explores whether a shared sense of being Irish exists despite the struggle and separation between the largely Catholic south and the largely

## SOC 318 - Introduction to Research

## College of Arts and Sciences

3 credit(s) Every semester
Techniques and problems of research in sociology. Research design, measurement, and data collection using surveys and other techniques. Computer analysis skills for social science data. Research project.

## SOC 319-Qualitative Methods in Sociology

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: WGS 317
Field research methods including participant observation, unstructured interviewing, life histories, and case studies. Preparation and
analysis of fieldnotes and interview data.

## SOC 334 - Criminal Justice

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Organization of criminal justice system in the United States and relations between its parts. Ideal versus actual roles of police, courts, and corrections in maintaining social control.

## SOC 335 - Political Sociology

College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: SOC 635
Relationships between society and politics. Impacts of individuals, groups, parties, and institutions on state power in global perspective. Additional work required of graduate students.

## SOC 343 - The Deviance Process

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Social processes that define behaviors or people as "deviant". Theories of anomic and nonconforming behavior. Individual, interpersonal, and structural consequences of labeling and exclusion.

## SOC 345 - Spanish Society and Pop Culture

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: ANT 355
Offered only in Madrid. Explores what is considered important, good, and fashionable in Spain today and how these values relate to historical developments as well as foreign influences.
PREREQ: SPA 201

## SOC 353-Sociology of the African American Experience

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: AAS 353
Theory and research of African American sociologists in the historical, social, and political context of American sociology. Relation of their work to the African American experience and its reception and impact in the public policy arena.

## SOC 354 - Gender, Militarism, and War

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 386, WGS 354
Examines militarism and war and their relationship to gender and power. Particular attention is given to how war impacts people differently across axes of race, class, ethnicity, sexuality, and other forms of identity.

## SOC 355 - Sociology-of Health and Illness

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 355
Conceptions of health and illness in society. The nature and organization of health professions and health delivery systems. Social aspects of health related behavior.

## SOC 361 - Youth, Schooling and Popular Culture

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: CFE 362, WGS 362
Positioned where school, media, and youth cultures intersect. How schools and media represent "good" and "bad" youth, and how youth negotiate schools and popular cultures. Includes theories of popular culture and adolescence. Additional work required of graduate students.

## SOC 362 - Religion, Identity and Power

## College of Arts and Sciences

3 credit(s)
Crosslisted with: PSC 362, REL 355
Examines ascendancy of religious movements; prominence of religious ideas; secularization and religion as a political force; conceptual and historical issues in relation to religious ideas and movements, including various Islamic revivals and the Christian right. Offered in London and Madrid only.

## SOC 363 - Urban Sociology

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Influence of the urban way of life. Ecological and population structure and changes in the modern composite city and metropolitan region. Urban planning in relation to economic patterns, family, education, government, recreation, and religion.

## SOC 364 - Aging and Society

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: WGS 364
Double Numbered with: SOC 664
Current policy issues in an aging society. Health care, end-of-life, social security, productive aging, and generational equity. Special problems facing elderly women and minorities.

## SOC 367 - Sociology of Sport

College of Arts and Sciences
3 credit(s) Every semester
Sport and race. Class and gender. College sports. Interrelationships among sport, media, and business/industry.

## SOC 373 - Sociology of Work

## College of Arts and Sciences

3 credit(s) Irregularly
Meaning and significance of work for individuals and societies. Changing nature of work. Structures of work and the labor force. Occupational recruitment, socialization, mobility, and discrimination.

## SOC 377 - Class, Status, and Power

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: SOC 677
Structures, causes, and consequences of socioeconomic inequalities in modern societies. Poverty and wealth, social mobility, and the persistence of inequality. Comparison and assessment of theories of social stratification.

## SOC 397 - Criminology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Nature and significance of crime. Historical and modern explanations of crime. Varieties of crime. Issues in measuring crime and assessing its effects. Evaluation of crime control strategies.

## SOC 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Every semester
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SOC 406 - Sociological Theory

## College of Arts and Sciences

3 credit(s) Every semester Introduction to classic and contemporary theory in sociology. Relevance of theory to research and analysis of social issues.

## SOC 409-Sociology of the Globalization of Music

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Intercultural course introducing the study of traditional and modern non-western music in cultural context. Focus on non-western urban, hybridized forms of popular music. Course fee covers tickets and related costs. Offered in London only.

## SOC 410 - Seminar on Social Change

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: AAS 410
Changes in African American communities or in the circumstances of African Americans within
a particular institutional arena. Movements to promote change and obstacles to change. Substantive focus varies.
Repeatable

## SOC 412 - Multicultural London

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Political, social and economic patterns of urban development; recent debates about multicultural cities; development of urbanism; political strategies; ethnic pluralism in British society; issues of identity, race, ethnicity and religion. Mandatory site visits. Offered in London only.

## SOC 413 - There Goes the Neighborhood: US Residential Segregation

College of Arts and Sciences
3 credit(s) Upon sufficient interest Crosslisted with: AAS 413
Chronicles patterns of racial residential segregation in the US by examining the methods that maintain racially distinct neighborhoods. Explores link between segregation and education, social mobility, health, and mortality.

## SOC 415 - Global Cities

## College of Arts and Sciences

3 credit(s) Upon sufficient interest Sociological perspectives on city character and development in the light of expanding urbanization on an international scale: demographic dynamics and immigration, economic growth, politics and governance, and other areas including infrastructure and environment connections and culture.

## SOC 416 - Race, Crime and Punishment

College of Arts and Sciences
3 credit(s) Upon sufficient interest Crosslisted with: AAS 416
The multiple and complex relationships between race, the power to punish, and crime control policies and practice. Exploration of the theories of crime and punishment from classic to postmodern.

## SOC 417 - Sociology of Disaster

## College of Arts and Sciences

3 credit(s) Irregularly
Social effects of disaster from macro and micro levels of analyses. How social structures, groups and institutions react to the loss of social function as a result of disaster.

## SOC 421 - Population Issues

## College of Arts and Sciences

3 credit(s) Irregularly

Human mortality, fertility, and migration and how they affect social life. Life expectancy, low fertility, health disparities, family planning, and urbanization. United States and cross-national comparisons.

## SOC 422 - Work and Family in the 21st Century

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: CFS 422, WGS 422
Examines the social, demographic, and economic forces that are reshaping the boundaries between family and work.

## SOC 423 - Technology, Science and Society

## College of Arts and Sciences

3 credit(s) Irregularly
How technology and science shape and re-shape our experiences of 'self' and 'body' and our visions of 'nature' explored through history, theory, science fiction, art, and our sociological imaginations.

## SOC 424 - Representations of Ability \&

 Disability
## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Crosslisted with: DSP 424
Representations of disability in autobiographical
accounts and professional narratives, and implications of these representations for educational practice and policy.

## SOC 425 - Feminist Organizations

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 425
Double Numbered with: SOC 625
Analyzes feminist organizing/activist work within and beyond the U.S. Interrogates what counts as feminist organizing and how different organizations use feminist principles in work for social change. Additional work required of graduate students.

## SOC 426 - Social Issues and

 Deliberative DemocracyCollege of Arts and Sciences
3 credit(s) Irregularly
Examination of social issues and public policy through the process of public deliberation. Class projects involving community forums. Social research, critique and analysis of public policy and social change.

## SOC 427 - New York City: Black Women Domestic Workers

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring

Crosslisted with: AAS 427, WGS 427
Double Numbered with: SOC 627
Historical understanding of Black women's engagement in paid domestic work in the United States, increasing need for domestic workers in the ever-changing economy and family, and the social construction of Black women as "ideal" domestic workers.

## SOC 428 - Culture, Sub-culture and Style

## College of Arts and Sciences

3 credit(s) Every semester
Offered only in London. Examines cultural change, debates about culture, and how cultural phenomena are related to the societies from which they emerge.

## SOC 429 - Politics, Gender and Race in the Contemporary Spanish Short Story

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SPA 429, WGS 429
Offered only in Madrid. Overview of the
Spanish short story from late 19th century to present. Themes of political and social rifts of Spanish society in the 20th century, female representations, and images of exclusion.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## SOC 432 - Gender and Disability

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: DSP 432, WGS 432
This course will investigate the intersection of gender and disability and how it impacts such issues as representation/self-representation, art and poetry, illness, education, sexuality, reproduction and motherhood, and caring work.

## SOC 433 - Race, Class, and Gender

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 433
Intersection of oppression and privilege via socially constructed categories of "race,"" "class,"" and "gender." Racism, sexism, institutional authority, and multiculturalism.

## SOC 434 - Globalization and Social Change

## College of Arts and Sciences

3 credit(s) Irregularly
How globalization is reshaping people's lives in the US and other societies. Causes, directions, consequences. Linking and standardization of patterns of consumption, culture, and production around the world.

## SOC 435 - Sexual Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: WGS 435
Social construction of sex and sexuality. Formation and organization of sexual communities, of sexuality as a form of social control. Social issues related to sexuality.

## SOC 438 - Disability and Popular Culture

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: DSP 438
Explore representations of disability through the analysis of books, movies, television, cartoons, and journalism. It will examine how disability is portrayed by people with and without disabilities, and discuss influences on public perceptions of disability.

## SOC 440 - Sociology of Disability

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: DSP 440
A theoretical understanding of disability through the lens of sociology and that of disability studies and demonstrates how cultural institutions shape conceptions of disability in society.

## SOC 441 - Federal Indian Policy and Native American Identity

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: NAT 441
Shifts in Federal Indian policy and the social construction of American Indian identity. Identity struggles and identity politics in relation to blood and descent, community, land and sovereignty.

## SOC 444 - Contemporary Native American Movements

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: NAT 444
Sociological analysis of Native American movements from 1960s to the present. National and regional movements in relation to jurisdictional issues and human rights. Red Power and pan-Indian movements are considered.

## SOC 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 445, WGS 445
Double Numbered with: SOC 645
A political economy approach to educating
students about the human and capital costs of
tourism to the Caribbean. The integral relationship between sex work and Caribbean tourism exposes the region's development that has resulted in its current configuration.

## SOC 446 - The Social Impact of the Internet

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: SOC 646
Sociological implications of instantaneous communication, online publishing, identities and interactions, communities transcending geographic borders, and openly available information and opinion. Additional work required of graduate students. Offered only online.

## SOC 447 - Social Change and Conflict in Modern China

College of Arts and Sciences
3 credit(s) Irregularly
Social and economic transformations in China in terms of social classes, cultural patterns, urban change, family patterns, ethnic tensions, and struggles over political rights. Questions of Taiwan and Tibet. How China's development affects the U.S.

## SOC 448 - The Dynamics of Prejudice and Discrimination

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: SOC 648
Research and theory of prejudice and discrimination: inclusion/exclusion of individuals/ social groups; classification of in/out groups; contributing roles of processes (difference, power, labeling, silencing). Recommended for upper-level students with some social science background and other coursework dealing with social inequities.

## SOC 449 - The Sociology of Evil

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: SOC 649
Social conditions and processes allowing systematic dehumanization; perspectives of victim, perpetrator, audience, possibility of reconciliation. Extreme examples of evil; subtle ways of dehumanizing the other. Ethnic cleansing, international trafficking, terrorism. Additional work required of graduate students. Offered only online.

[^10]from the Unification to the present. Offered only in Florence.

## SOC 456 - LGBT Studies in Sociology

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: QSX 456, WGS 456
Recent sociological research in lesbian, gay, bisexual, and transgender studies addressing sexuality, identity, community, representation, politics, social change and their inter-relations.

## SOC 457 - Gender, Politics, Society in Europe (1400-1800)

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 457, WGS 457
Relationship between the sexes in politics, philosophy, literature, and art. Emergence of a dissident "voice" relative to gender identity and social role, with implications for race and religion. Offered only in Florence.

## SOC 458 - Contemporary Issues in Turkey

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: IRP 458, PSC 458
Offered only in Istanbul. Key political and social issues in contemporary Turkey. Democratization; relationship between secularism, the role of the military and Islam in political life; foreign policy including Turkish-US relations; nationalism, minorities, gender, human rights. Additional work required of graduate students.

## SOC 466 - Organizations and Society

## College of Arts and Sciences

3 credit(s) Irregularly
Nature and types of organizations and organizational processes. Dynamic relationships of organizations to societies and individual identities.

## SOC 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## SOC 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.

## Repeatable

## SOC 492 - Work and Inequality

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: WGS 492
Current and past issues in research and policy concerning inequalities associated with work. Social construction and structural arrangements of work in American society.

## SOC 495 - Senior Thesis

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Contemporary issues in sociology. Study of a particular problem by research methods. Collection and analysis of data. Written thesis and oral presentation required.

## SOC 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## SOC 500 - Selected Topics <br> College of Arts and Sciences

1-6 credit(s) Upon sufficient interest
In-depth selected study of certain social problems.
Repeatable

## SOC 513 - Statistics for Social Science

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Designed for first-year graduate students and sociology majors considering graduate study. Measures of central tendency and dispersion, hypothesis testing, and indices of association between variables. Application of statistics to social science data.

## SOC 571 - Topics in Sociolinguistics

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: ANT 571, LIN 571
Functions of language in society. Geographical, socioeconomic, and male-female differentiation. Functions of various types of speech events. Requirements include a research project. Repeatable 1 time(s), 6 credits maximum

## Soling Program

## SOL 240 - Practicum in the

 Humanities-SolingCollege of Arts and Sciences
1-6 credit(s) Upon sufficient interest

Humanities practicum in the Soling Program. Repeatable

## SOL 250 - Practicum in the Natural Sciences and Mathematics-Soling <br> College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Natural sciences practicum in the Soling Program. Repeatable

## SOL 260 - Practicum in the Social Sciences-Soling

College of Arts and Sciences
1-3 credit(s) Upon sufficient interest Social sciences practicum in the Soling Program. Repeatable

## SOL 290 - Independent Study

## College of Arts and Sciences

1-6 credit(s)
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## SOL 304 - Soling Project I: Introduction to Team Problem Solving

College of Arts and Sciences
3 credit(s) Every semester Teams of 3-5 students complete a project sponsored by the University community. Emphasis: working in a cooperative learning environment, using University resources, acquiring basic problem solving skills.

## SOL 305 - Soling Project II:

 Intermediate Team Problem SolvingCollege of Arts and Sciences
3 credit(s) Every semester tudents supervise a team of 3-5 students completing projects sponsored by the greater SU community. Emphasis: planning, coordinating, and communicating.

## SOL 340 - Practicum in the Humanities, Soling <br> College of Arts and Sciences <br> 1-6 credit(s) Upon sufficient interest Humanities practicum in the Soling Program. Repeatable

## SOL 344 - Creativity and the Art of Crossing Borders

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Explores the folk and fine art of puppetry through hands-on studios and workshops; an incubator for the students' creative self expression.

## SOL 345 - Puppets and Community

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Linking Open Hand Puppet Theater, the Syracuse City schools and SU students will collaborate with third graders at a city school to create giant puppets for use in a puppet pageant that will capture, celebrate, and unify the diverse groups of that community.

## SOL 350 - Practicum in the Natural Sciences and Mathematics, Soling

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Natural sciences practicum in the Soling Program. Repeatable

## SOL 360 - Practicum in the Social Sciences, Soling <br> College of Arts and Sciences <br> 1-6 credit(s) Every semester <br> Social sciences practicum in the Soling Program. Repeatable

## SOL 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SOL 404 - Soling Project III: Advanced

 Team Problem Solving
## College of Arts and Sciences

3 credit(s) Every semester
Students interact with an off-campus sponsor in defining and completing a project that meets a specific need.

## SOL 405 - Soling Project IV: Technical Problem Solving

## College of Arts and Sciences

3 credit(s) Every semester
Student forms teams that act as consultants to other Soling teams to provide technical assistance.

## Social Science

## SOS 200 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) At least $1 x$ fall or spring
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SOS 400 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SOS 575 - Philosophy of Social Science

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: PHI 575
Philosophical and methodological issues in social and behavioral science. Role of laws in explanation of human action, methodological individualism and holism, functional explanation, value-neutrality, behaviorism, and com puter simulation.

## Spanish

## SPA 101 - Spanish I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Spanish. No prior experience or admission by placement testing. Students cannot enroll in SPA 101 after earning credit for SPA 102, SPA 201, SPA 202, or higher.
PREREQ: REQUIRED PLACEMENT EXAM SCORE

## SPA 102 - Spanish II

## College of Arts and Sciences

4 credit(s) Every semester Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Spanish. Students cannot enroll in SPA 102 after earning credit for SPA 201, SPA 202, or higher. PREREQ: SPA 101 OR REQUIRED PLACEMENT EXAM SCORE

## SPA 201 - Spanish III

## College of Arts and Sciences

4 credit(s) Every semester
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Spanish. Students cannot enroll in SPA 201 after earning credit for SPA 202 or higher.
PREREQ: SPA 102 OR REQUIRED PLACEMENT EXAM SCORE

## SPA 202 - Spanish IV

College of Arts and Sciences
4 credit(s) Every semester
Continuing proficiency-based course which focuses on reading, discussing, and analyzing authentic texts as a basis for the expression and interpretation of meaning. Conducted in Spanish. Students cannot enroll in SPA 202 after earning credit for a course higher than SPA 202. PREREQ: SPA 201 OR REQUIRED PLACEMENT EXAM SCORE

## SPA 211 - Intermediate Oral Practice

College of Arts and Sciences
1 credit(s) Every semester
Additional practice for students in SPA 201 or 202. Attention confined to the spoken language. Repeatable

## SPA 212 - Intermediate Oral Practice

## College of Arts and Sciences

1 credit(s) Every semester
Additional practice for students in SPA 201 or 202. Attention confined to the spoken language. Repeatable

## SPA 301 - Approaches to Reading Texts

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Introduction to reading and analyzing texts written in Spanish.

## SPA 302 - Advanced Language Usage

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 315
Advanced grammar, composition, and conversation.

## SPA 305 - Mare

Nostrum:Mediterranean Introduction to Spain

College of Arts and Sciences
2 credit(s) Every semester
Thirteen-day seminar introduces students to Spanish culture with an emphasis on the heritage and industry of the Mediterranean and the consciousness that has shaped cuisine, literature, architecture, fashion, lifestyles and social mores in contemporary Spain. Offered only in Spain. PREREQ: SPA 201

## SPA 321 - Introduction to Spanish Literature

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Introductory-level study of representative literary texts of Spain from the 12th century to the present.

## SPA 322 - Introduction to Latin American Literature

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: LAS 302
Modern Latin American literature using new methods of study, basically Cultural Semiotics.

## SPA 325 - Colonial Latin America

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 322, LAS 322
Development of Amer-Indian civilization and the Spanish conquests. Evolution of the Spanish American economy and the unique American culture. Growth of the plantation economy of Brazil. The movements toward independence. PREREQ: SPA 201 OR SPA 202 OR (SPA 300 OR ABOVE)

## SPA 326 - Beyond the Screen: Latin

 American and Spanish Film
## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 326
Film theories (historical, auteur, national, etc) and terminology, trends in film, women in film, problems with cultural representation.

## SPA 334 - Contemporary Issues in Chile and Latin America <br> College of Arts and Sciences <br> 3 credit(s) Every semester <br> Crosslisted with: HST 406, IRP 334, LAS 334, PSC 428 <br> Offered only in Santiago. This seminar features in-situ lectures and activities in Chile, Argentina and Uruguay introducing important political, sociological and environmental issues in the Southern Cone region.

## SPA 364 - Modern Spanish Art

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HOA 464
Spanish art and architecture from the late eighteenth century to the present. Goya, succeeding styles and movements to the modernism of Picasso, Miro, and Dali, and later styles. The architecture of Gaudi. Offered only in Madrid.
PREREQ: SPA 201 OR SPA 202 OR (SPA 300 OR ABOVE)

## SPA 400 - Selected Topics in Spanish

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## Repeatable

## SPA 402 - Hispanic Journalistic Practices

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: LAS 402
Examines journalism and media in Spanish as they are practiced in Spanish-speaking countries and the U.S. Conducted in Spanish. [Effective spring 2009]

## SPA 403 - Advanced Methods for Teaching Spanish

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Presents theory and teaching methodology and develops the practical aspects of teaching
Spanish as a second language.
PREREQ: LIN 421 AND SPA 301 AND SPA 302

## SPA 417 - History of Women in Spain

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 417,WGS 417
Offered in Madrid only. History of women in Spain from primitive communities to the present. Topics include medieval, Golden Age, Enlightenment, and Romanticism; liberalism and feminism; women under Franco; Marxism and feminism; feminist movement in Spain.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## SPA 429 - Politics, Gender and Race in

 the Contemporary Spanish Short Story
## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 429, WGS 429
Offered only in Madrid. Overview of the Spanish short story from late 19th century to present. Themes of political and social rifts of Spanish society in the 20th century, female representations, and images of exclusion.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## SPA 433 - Business Spanish

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 433
Language usage in relation to Spanish and Latin American business.

## SPA 435-Spanish Phonetics and Phonology

## College of Arts and Sciences

3 credit(s)
Double Numbered with: SPA 635
Introduction to formal linguistic analysis of the Spanish sound system. Survey of dialectal variation. Additional work required of graduate
students.

## SPA 436 - The Structure of Spanish

College of Arts and Sciences
3 credit(s)
Double Numbered with: SPA 636
Introduction to the formal linguistic analysis of the structure of Spanish sentences. Additional work required of graduate students.

## SPA 437 - Introduction to Spanish Linguistics

College of Arts and Sciences
3 credit(s)
Double Numbered with: SPA 637
Formal linguistic analysis of the Spanish language: phonetics, phonology, morphology, syntax, and language variation (sociolinguistics and dialectology). Taught entirely in Spanish. Additional work required of graduate students. PREREQ: SPA 202

## SPA 438 - History of the Spanish Language

College of Arts and Sciences
3 credit(s)
Double Numbered with: SPA 638
The evolution of modern Spanish. The causes of linguistic change, the development of the phonological and morphosyntactic systems, the semantic/lexical development of the language. Additional work required of graduate students.

## SPA 439-Community Outreach: Language in Action

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: LAS 439
Double Numbered with: SPA 639
Language immersion in the Spanish-speaking community in the Syracuse area. Emphasis on improving spoken and written Spanish through a service learning component. Additional work required of graduate students.

## SPA 441 - Medieval and Golden Age Literature <br> College of Arts and Sciences <br> 3 credit(s) <br> Critical reading and discussion of significant literary works drawn from the Middle Ages and the 16 th and 17 th centuries.

## SPA 443 - Cervantes

College of Arts and Sciences
3 credit(s) Irregularly
Don Quixote, with selections from other representative works by Cervantes.

## SPA 451 - Identities and Cultures of Spain

## College of Arts and Sciences <br> 3 credit(s) <br> Literary works will include texts by Jovellanos, Feijóo, Larra, Pardo Bazán, Ganivet, Unamuno, Goytisolo, Martin Gaite, and Subirats, among others.

## SPA 453 - Spanish Literature (20th Century)

## College of Arts and Sciences

3 credit(s)
Diachronic study of the Spanish short story and poetry. Emphasis on the different modes of neorealism, experimentalism, and the most recent trends.

## SPA 455 - Romantics and Realists: Gender Politics in Spanish Literature and Film

## College of Arts and Sciences

3 credit(s)
Analyze the invention of notions like literature, women, and nation in Spain. Representations of women in literary and cinematic texts.

## SPA 457 - Civil War to Contemporary Spanish Literature and Culture

## College of Arts and Sciences

3 credit(s)
Spanish writers during and after Franco's dictatorship. Literary works will include texts by Laforet, Cela, Rodereda, Gil de Biedma, Riera, Millas, among others.

## SPA 458-20th Century Spanish Theater

## College of Arts and Sciences

3 credit(s)
Diachronic study of the Spanish theater. Literary works will include texts by Valle-Inclán, Garcia Lorca, Sastre, Buero Vallejo, Arrabal, Pedrero, and Onetti, among others.

## SPA 459 - Contemporary Spanish Cinema

## College of Arts and Sciences

3 credit(s) Every semester Offered only in Madrid. Survey of Spanish cinema since 1950 through classic directors Buñuel, Saura and Erice, and contemporary auteurs Almodóvar and Amenábar. Special attention also given to female directors and recent horror classics.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## SPA 461 - Nobel Prize Writers of the Spanish-Speaking World

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 461
Presents works by 10 Nobel Laureates in Spanish. 301

## SPA 462 - Border Culture

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 A theoretical reflection on the notion of frontier in contemporary times. A review of the different types of representations (literary, artistic, film) and the subject that lives in the notion of frontier. Emphasis on the US-Mexico border.

## SPA 463 - Contemporary Latin American Theater

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 463
Introduction to major theater works and movements in 20th-century Latin America.

## SPA 465 - Literature and Popular Culture

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 465
Mass culture and post modernism. Interactions between mass media culture, art, and politics in Latin America.

## SPA 467 - Film and Literature

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 467
A critical study of books made into film in Latin American literature.

## SPA 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## SPA 471 - Contemporary Latin American Literature

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 471
Latin American literature from the 1920s to the present. Emphasizes the development of the contemporary novel.

SPA 475 - Women, Myth and Nation in Latin American Literature<br>College of Arts and Sciences<br>3 credit(s)<br>Crosslisted with: LAS 475, WGS 475<br>Myths about women and nation. Modern interpretations and reconstructions of these myths in contemporary literature by Latin American women writers. Literary texts with theories on myth. Representation and "real" constructions of feminine and national identities in different regions of Latin America.

SPA 479 - Perspectives on Mexico and Central America: Literature, Art, Film
College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 479
Literary works, films and arts created in Central
America. Topics include perspectives on indigenism, feminine and masculine identities, religion, politics, technology and its future implications on those countries.

## SPA 481 - The Literature of Latinos in the United States

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 481
Short stories and poetry written in Spanish by Latinos. Themes such as identity, language, and culture. Political, social, and cultural readings.

## SPA 489 - Hispanic Caribbean <br> Narrative and Film

College of Arts and Sciences
3 credit(s)
Crosslisted with: LAS 489
Texts in Spanish by Caribbean writers. Explores themes such as women, politics, death, identity. Readings are accompanied by films and followed by critical theory and analysis.

## SPA 493 - Afro-Hispanic Topics in Caribbean Literature

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 493
Caribbean African-Hispanic literature (poetry and short stories) with different areas of social and political interest. Emphasis on different Caribbean religions.

## SPA 494 - Hispanic Caribbean <br> Literature

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: LAS 494
This course studies the Spanish Caribbean's
multiple identities through the discussion of a series of literary and cultural texts. The course concentrates on race, gender, sexuality, migrations, postcolonial relations, popular culture and diasporas.

## SPA 495 - Marginal Cultures in Hispanic Caribbean Literature

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 495
Caribbean poetry and short stories about race, gender, and homoeroticism. Includes social, political, and cultural readings.

## SPA 497 - Text and Context in Cuban Revolutionary Literature

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 497
Literary works of the Cuban revolutionary period by Cuban and Cuban-American authors from different literary and political points of view.

## SPA 498-Citizenship and Urban Violence in Latin America <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring A reflection on the inherent violence that characterizes Latin American urban centers, and the implications of such violence for their citizens.

## SPA 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Science, Technology, and Society

STS 101 - Introduction to Science, Technology, and Society

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: BPS 101
Assessing technological innovations and their impact on society. Economic, political, and ethical considerations in development of public policy. Examples will include biotechnology and energy technology.

## STS 203 - Introduction to Technology

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: ECS 203
Basic engineering principles behind some of today's rapidly changing technologies. The
capabilities, limitations, and application of these technologies to audio and TV systems, CD players, communications' satellites, radar, computers, and the electric power system. For nonspecialists.

## STS 380 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## STS 410 - Science and Technology in the Modern World

## College of Arts and Sciences

3 credit(s) Upon sufficient interest
Crosslisted with: HST 410
Interaction of science with technology from 1700 to the present. Technological artifacts and their scientific background. Development of new technology from scientific research and from oldfashioned dreaming and tinkering.

## Applied Statistics

## STT 101 - Introduction to Statistics

College of Arts and Sciences
3 credit(s)
Provides a working knowledge of statistics: descriptive statistics, sampling distributions, data analysis using software. Students cannot receive credit after having received a C or better in MAT 121 or MAT 221.

## Kiswahili

## SWA 101 - Kiswahili I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Introductory proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Kiswahili. No prior experience or admission by placement testing. Students cannot enroll in SWA 101 after earning credit for SWA 102, SWA 201, SWA 202 or higher.

## SWA 102 - Kiswahili II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course, which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Kiswahili. Students cannot enroll in SWA 102 after
earning credit for SWA 201, SWA 202, or higher. PREREQ: SWA 101

## SWA 201 - Kiswahili III

College of Arts and Sciences
4 credit(s) At least 1x fall or spring Continuing proficiency-based course, which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Kiswahili. Students cannot enroll in SWA 201 after earning credit for SWA 202 or higher.
PREREQ: SWA 102

## SWA 202 - Kiswahili IV

## College of Arts and Sciences

4 credit(s) At least $1 x$ fall or spring
Continuing proficiency-based course, which further refines and expands previously acquired linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Activities are conducted in Kiswahili. Students cannot enroll in SWA 202 after earning credit for a course higher than SWA 202.
PREREQ: SWA 201

## SWA 280 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Tamil

## TML 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable 90 time(s)

## Turkish

## TRK 100 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester. Repeatable

## TRK 101 - Turkish I

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Proficiency-based course which prepares students to understand, speak, read, and write in culturally authentic contexts. Activities are conducted in Turkish. Students cannot enroll in TRK 101 after earning credit for TRK 102, TRK 201, TRK 202, or higher.

## TRK 102 - Turkish II

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course which develops communicative abilities in speaking, listening, reading, and writing in culturally authentic contexts. Activities are conducted in Turkish. Students cannot enroll in TRK 102 after earning credit for TRK 201, TRK 202, or higher. PREREQ: TRK 101

## TRK 180 - International Course

## College of Arts and Sciences

1-12 credit(s) Upon sufficient interest
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## TRK 201 - Turkish III

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring
Continuing proficiency-based course which refines and expands previously acquired linguistic skills in culturally authentic contexts. Activities are conducted in Turkish. Students cannot enroll in TRK 201 after earning credit for TRK 202 or higher.
PREREQ: TRK 102

## TRK 202 - Turkish IV

## College of Arts and Sciences

4 credit(s) At least 1x fall or spring Continuing proficiency-based course which further refines and expands linguistic skills in culturally authentic contexts. Incorporates reading, discussing, and analyzing texts as a basis for the expression and interpretation of meaning. Conducted in Turkish. Students cannot enroll in TRK 202 after successfully completing a course higher than TRK 202.
PREREQ: TRK 201

# Undergraduate Research Program 

URP 100 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## URP 150 - Undergraduate Research I

## College of Arts and Sciences

1-6 credit(s) Every semester
Research or other academic work in conjunction with faculty-generated research or professional work project as administered through the Undergraduate Research Program. Repeatable 3 time(s), 12 credits maximum

## URP 250 - Introduction to Undergraduate Research II

## College of Arts and Sciences

1-6 credit(s) Every semester
Research or other academic work in conjunction with faculty-generated and sponsored research or professional work project as administered through the Undergraduate Research Program.
Repeatable

## URP 270 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## URP 450 - Advanced Undergraduate Research

## College of Arts and Sciences

1-6 credit(s) Every semester
Research or other academic work in conjunction with faculty-generated and sponsored research or professional work project as administered through the Undergraduate Research Program. Repeatable

## URP 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those
in good academic standing. Repeatable

## Women's and Gender Studies

WGS 101 - Introduction to Women's and Gender Studies

College of Arts and Sciences
3 credit(s) Every semester
Introduces the interdisciplinary field of women ¿s and gender studies; gender as a social construct shaped by race, class, sexuality, disability, and nation; and feminist theories of oppression, power, and resistance.

## WGS 192 - Gender and Literary Texts

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: ETS 192
Construction and representation of "gender," especially as it affects the production and reception of literary and other cultural texts.

## WGS 201 - Transnational Feminist Studies

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Introduces transnational feminist analysis and politics. Interdisciplinary exploration of how gender intersects with other forms of identity and is shaped by constructions of knowledge, power, and experience across local and global contexts.

## WGS 230 - Intergroup Dialogue

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: SOC 230
Guided intergroup communication skills. Cycle of socialization; social identities, and social structures that create and maintain inequality; power of dynamic of racism, sexism, and other systems of oppression. Students explore conflict and enact collaboration to deepen understanding. Repeatable 1 time(s), 6 credits maximum

## WGS 240 - Topics in Contemporary Feminisms

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Interdisciplinary and intersectional study of current topics and debates in feminist scholarship, activism, politics, and cultural production..
Repeatable 1 time(s), 6 credits maximum
WGS 248 - Ethnic Inequalities and
Intergroup Relations Intergroup Relations
College of Arts and Sciences
3 credit(s) Every semester

Crosslisted with: SOC 248
Identification of individuals and groups by self and others as members of ethnic categories. Consequences of ethnic identifications for individual, group, and societal interaction. Emphasizing ethnic inequalities, group interactions, social movements and change, racism, prejudice, and discrimination.

## WGS 258 - Poverty and Discrimination in America

## College of Arts and Sciences

3 credit(s) At least $1 \times$ fall or spring Crosslisted with: ECN 258
Nature and causes of inequality, poverty, and discrimination in rural and urban America. Income maintenance, employment, training, education, and other antipoverty programs; antidiscrimination and equal opportunity policies. Students may not receive credit for both ECN/WGS 258 and ECN/ WGS 358.

## WGS 281 - Sociology of Families

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 281
Families and their connections to other social and economic institutions. Diversity of family forms and experiences. Formation and dissolution of relationships. Trends and changes.

## WGS 297 - Philosophy of Feminism

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: PHI 297
Philosophical analysis of feminist theory. Feminist theories about human nature, gender, relations among gender, race and class, and causes of and remedy for women's subordinate status.

## WGS 300 - Selected Topics

## College of Arts and Sciences

## 1-6 credit(s)

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## WGS 301 - Feminist Theories

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Examines the conceptual underpinnings of multiple and interrelated forms of inequality; critiques existing theoretical paradigms of sex/ gender; explores the politics of power, knowledge, and subjectivity; and fosters intersectional, transnational, and decolonial feminist thinking.

## WGS 303 - Black Women Writers

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: AAS 303
Literature and scholarship by Black women writers. Analytical reading, writing and discussion of various topics, stylistic questions, strategies generated in autobiography, fiction, drama, poetry, speeches and scholarship: 1960's to present, and earlier times. Bambara, Davis, Hurston, Jones, Lorde, Morrison, Williams.

## WGS 305 - Sociology of Sex and Gender

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 305
Social forces shaping women's and men's lives in contemporary societies. Changing gender expectations. Intersections of gender with race and ethnicity, class, and age. Social movements for women's and men's liberation.

## WGS 306 - Sexuality in Spain

## College of Arts and Sciences

3 credit(s) Every semester Crosslisted with: QSX 306, SOC 306 Offered only in Madrid. Explores important transformations in Spaniards' concepts of sexuality and gender through readings, film screenings and observing certain urban areas in Madrid.

## WGS 307 - African Women Writers

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: AAS 307
Literature in English and translation by African women writing from a variety of cultural stances and geographic locations in Africa, Europe and North America. Writing styles and creative modes of expression used by African women writers to convey and envision the life of their work. Adichie, Aidoo, Dangaremba, El Sadaawi, Liking, Mbye d'Ernville, Tadjo.

WGS 309 - Race, Gender and Sexuality in the African Diaspora

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: AAS 309, SOC 309
To introduce students to the reality of how institutional racism informs the "common sense" understanding of what is known as Black sexuality.

## WGS 310 - Feminist Inquiries

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring An interdisciplinary and critical investigation of the relationship between feminism and
feminist knowledge production. Offers insight into the development and application of feminist epistemologies, theories, and methodologies. PREREQ: WGS 101 OR WGS 201

## WGS 317-Qualitative Methods in Sociology

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 319
Field research methods including participant observation, unstructured interviewing, life histories, and case studies. Preparation and analysis of fieldnotes and interview data.

## WGS 318-American Social Movements

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: PSC 328
Social movements were always integral to American politics. Includes emergence, strategies, political context and influence of temperance, abolition of slavery, women's suffrage, labor, civil rights, anti-war, feminism, nuclear freeze, gay rights, and global justice movements.

## WGS 319 - Gender and Politics

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 319
Relationships between gender and American political institutions, law, and policymaking processes. How social movements based on gender, prevailing gender ideologies, and gender relations have shaped American politics. Exploring how the American state has shaped the political meanings and relative positions of power associated with men and women.

## WGS 324 - Modern South Asian Cultures

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: ANT 324, SAS 324
Societies of India, Pakistan, Bangladesh, and Sri Lanka. Social organization, economic and political structures, religions and world view, survey of languages, the arts. Transition and modernization, rural and urban problems.

## WGS 325 - Economics and Gender

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: ECN 325
Economic issues examined within a gender sensitive context. Includes the economics of family, the economics of marriage, and labor market discrimination and segregation.

## WGS 326 - Persons in Social Context

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: SWK 326
Assessment of behavior of diverse individuals, groups, and social systems. Applying concepts from the biological, behavioral, and social sciences in identifying and understanding forms and causes of behavior.

## WGS 327 - Africa Through the Novel

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 326
Cultural, political, and social life of Africa and Africans through African literature. Each semester deals with a motif (e.g., novels of Achebe).

## WGS 328 - Human Diversity in Social Contexts

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Crosslisted with: SWK 328
Diversity, including race, gender, sexual orientation and selected topics. Examines individual, group, and institutional identity formation. Theories of biopsychosocial development, reference group affiliation, social stratification, oppression, and institutional discrimination. Implications for social work practice.

## WGS 329 - Biopsychological Perspectives on Women's Health

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: PSY 329
Psychoanalytic and evolutionary theories of gender and adaptive fitness; pscyhoneuroimmunological perspectives on sexually influenced disease processes, aging, and biopsychological influences on women's health.

## WGS 335 - American Social and Cultural History

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: HST 335
Nature of "American character" through the last century. Aspects of intellectual life, social mores, industry, and art that represent Americans' definitions of themselves and their nation.

## WGS 341 - Women, Abolition, and Religion in 19th Century America <br> College of Arts and Sciences <br> 3 credit(s) <br> Crosslisted with: HST 387, REL 341

The role that religion may have played in women's understandings of themselves as abolitionists and
social reformers. A selected group of women will be studied, with considerable attention given to Frances Harper.

## WGS 342 - Women in America: 17th

 Century to the Civil WarCollege of Arts and Sciences
3 credit(s)
Crosslisted with: HST 340
Focus on significant social and political
transformation, activism, and individuals

## WGS 343 - Latina Feminist Theories

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: LAS 343, LIT 343
Examines Latina feminist and queer thought and methods for social transformation; places US women of color feminisms in conversation with Latina/o and Latin American histories, identities, cultural productions, and activisms.

## WGS 349 - Women in America: Civil War to Present <br> College of Arts and Sciences <br> 3 credit(s) <br> Crosslisted with: HST 349 <br> Focus on significant social and political <br> transformation, activism, and individuals.

## WGS 354 - Gender, Militarism, and War

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PSC 386, SOC 354
Examines militarism and war and their relationship to gender and power. Particular attention is given to how war impacts people differently across axes of race, class, ethnicity, sexuality, and other forms of identity.

## WGS 355 - Sociology-of Health and Illness

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 355
Conceptions of health and illness in society. The nature and organization of health professions and health delivery systems. Social aspects of health related behavior.

## WGS 358 - Economics of US Poverty and Discrimination

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ECN 358
Economic analysis of inequality, poverty, and discrimination, as applied to USA. Income maintenance, employment, training, education, and other antipoverty programs; antidiscrimination and equal opportunity policies. Students may not
receive credit for both ECN/WGS 258 and ECN/ WGS 358.

## WGS 360 - Topics in Reading Gender and Sexualities

College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: ETS 360
Textual, cultural, and/or historical constructions of gender and sexualities.
Repeatable 2 time(s), 9 credits maximum
WGS 362 - Youth, Schooling and Popular Culture
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: CFE 362, SOC 361
Double Numbered with: WGS 662
Positioned where school, media, and youth cultures intersect. How schools and media represent "good" and "bad" youth, and how youth negotiate schools and popular cultures. Includes theories of popular culture and adolescence. Additional work required of graduate students.

## WGS 363 - Anthropology of Family Life

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 363
Historical and cross-cultural study of forms of family and domestic organization, marriage, status and sex roles, ideals, and customs of family life.

## WGS 364 - Aging and Society

College of Arts and Sciences
3 credit(s) At least $1 x$ fall or spring Crosslisted with: SOC 364
Double Numbered with: WGS 664
Current policy issues in an aging society. Health care, end-of-life, social security, productive aging, and generational equity. Special problems facing elderly women and minorities.

## WGS 365 - Negotiating

 Difference:Coming of Age Narratives
## College of Arts and Sciences

3 credit(s) Irregularly
Using a range of genres, explores influence of place, family, and social expectations on selfdefinition; examines politics of everyday life, including untellable silences and violence; considers how authors craft stories to resist marginalization.

## WGS 367 - Gender in a Globalizing World

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 367, GEO 367
Economic and cultural processes of globalization
as they affect different groups of men, women, and households; including gender and work, development and environmental change, and redefinitions of masculinity and femininity across the globe.

## WGS 371 - Gender in Latin American History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 371, LAS 371
History of women and gender relations from colonial period to the present. Influence of race, class, and ethnicity on gender. Relation of gender to labor, family, sexuality, and politics.

## WGS 379 - Gender, Race, and Colonialism

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: HST 379
Explores the intersection of gender and race in colonial ideologies, imperial practices and anticolonial nationalist movements, in the 18th and 19th centuries.

## WGS 381 - Italian and European Theater 1500-1700

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: DRA 381, LIT 381
Secular and professional drama as it emerged in Renaissance Italy and spread to Spain, England, and France. Selected works of Machiavelli, Monteverdi, Cervantes, Calderon, Shakespeare, Molière, Behn and others (in English). Offered only in Florence.

## WGS 384 - Goddesses, Women and Power in Hinduism

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: REL 384, SAS 384
Interrelationship of power as female and female power in Hindu cosmology, mythology, and society. Complexities of mythic, domestic, and economic gender hierarchies.

## WGS 389 - LGBT History

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 389, QSX 389
The history of lesbian, gay, bisexual, transgender experience in period and region (North America, Europe, or Global) of instructor's expertise, with attention to the international context..

## WGS 395 - Gender and Popular Culture

College of Arts and Sciences
3 credit(s) At least 1 x fall or spring

How gender is created, mediated, maintained and policed through popular culture. The role of celebrity, music, musicians and musical performers and performances, film, television, the news, gossip, the internet, and advertising.

## WGS 396 - Women and the American Frontier

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 396
The North American frontier, from the 17th to the early 20th century, as it was experienced by women of various cultural and national origins.

## WGS 400 - Selected Topics

## College of Arts and Sciences

$1-6$ credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## WGS 403 - African and Caribbean Women Writers

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: AAS 403
Comparative approaches and trans-Atlantic analysis of literature by women writers from Africa and the Caribbean. Representations and constructions of social, political, and cultural life in colonial, neo-colonial, and contemporary contexts. Writers such as Ba, Brodber, Dangaremba, Marshall, Head, Dandicat, Nwapa.

## WGS 404 - Family and Gender in Renaissance Italy

## College of Arts and Sciences

3 credit(s)
Crosslisted with: ANT 404, HST 404
Historical and interdisciplinary exploration of life stages, rites of passage, marriage, family, social life, sodomy, prostitution, career options, and alternate life strategies as illustrated by case studies. Offered only in Florence.

## WGS 408 - The Practice of Eros:A History of Sexuality in Europe (14001800)

## College of Arts and Sciences

3 credit(s)
Crosslisted with: ANT 408, HST 408
Authorized and "alternative" sexuality in Europe 15th to 18th centuries (especially Italy, France, and England.) "Licit love" (courtship, marriage, conjugal relations) as opposed to "illicit unions" (adultery, rape, prostitution, bestiality, homosexuality, lesbianism). Offered only in Florence.

## WGS 409 - A History of Witchcraft

College of Arts and Sciences
3 credit(s)
Crosslisted with: ANT 409, HST 409, REL 409
History of witchcraft from various perspectives: its intellectual roots, the causes and dynamics of the witch-hunt, and the beliefs and self-perceptions of those who were called "witches". Offered only in Florence.

## WGS 410 - Advanced Studies in Feminist Thought

College of Arts and Sciences
3 credit(s) At least 1x fall or spring Topics in women's and gender studies. PREREQ: WGS 101 OR WGS 201 Repeatable

## WGS 412 - French Women Writers

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: FRE 412
Double Numbered with: WGS 612
Trends in French feminine and feminist writing from the early modern period to the present. Conducted in French. Additional work required of graduate students.

## WGS 413 - Identity and Difference

College of Arts and Sciences
3 credit(s)
Crosslisted with: PHI 413, PSC 413
Interdisciplinary approach to examine concepts of identity and difference, challenges notions of subjectivity, nation and gender. Philosophical, political, and gender-related dimensions explored. Offered only in Florence.

## WGS 414 - Communication \& Gender

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: CRS 414
Exploration of assumptions under-lying different approaches to gender and communication. Gender and power implications of understanding communication as socially constructing identity and societal structures.

## WGS 417 - History of Women in Spain <br> College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: HST 417, SPA 417
Offered in Madrid only. History of women in Spain from primitive communities to the present. Topics include medieval, Golden Age, Enlightenment, and Romanticism; liberalism and feminism; women under Franco; Marxism and feminism; feminist movement in Spain.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## WGS 422 - Work and Family in the 21st Century

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: CFS 422, SOC 422
Examines the social, demographic, and economic forces that are reshaping the boundaries between family and work.

## WGS 425 - Feminist Organizations

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 425
Double Numbered with: WGS 625
Analyzes feminist organizing/activist work within and beyond the U.S. Interrogates what counts as feminist organizing and how different organizations use feminist principles in work for social change. Additional work required of graduate students.

## WGS 427 - New York City: Black Women Domestic Workers

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 427, SOC 427
Double Numbered with: WGS 627
Historical understanding of Black women's engagement in paid domestic work in the United States, increasing need for domestic workers in the ever-changing economy and family, and the social construction of Black women as "ideal" domestic workers.

## WGS 429 - Politics, Gender and Race in the Contemporary Spanish Short Story

## College of Arts and Sciences

3 credit(s) Every semester
Crosslisted with: SOC 429, SPA 429
Offered only in Madrid. Overview of the Spanish short story from late 19th century to present. Themes of political and social rifts of Spanish society in the 20th century, female representations, and images of exclusion.
PREREQ: SPA 202 OR (SPA 300 OR ABOVE)

## WGS 432 - Gender and Disability

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Crosslisted with: DSP 432, SOC 432
This course will investigate the intersection of gender and disability and how it impacts such issues as representation/self-representation, art and poetry, illness, education, sexuality, reproduction and motherhood, and caring work.

## WGS 433 - Race, Class, and Gender

College of Arts and Sciences
3 credit(s) At least 1x fall or spring

Crosslisted with: SOC 433
Intersection of oppression and privilege via socially constructed categories of "race,"" "class,"" and "gender." Racism, sexism, institutional authority, and multiculturalism.

## WGS 435 - Sexual Politics

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 435
Social construction of sex and sexuality. Formation and organization of sexual communities, of sexuality as a form of social control. Social issues related to sexuality.

## WGS 436 - Feminist Rhetoric(s)

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: CRS 436, WRT 436
Double Numbered with: WGS 636
Feminist rhetoric from both a historical and global context, utilizing both primary and secondary readings in order to gain a sense of breadth and depth in the field of feminist rhetoric. Additional work required of graduate students.

## WGS 438 - Trans Genders and

 Sexualities
## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: QSX 438
Examines normative and non-normative genders/ sexualities. Focuses on embodiment, desire, and identity. Examines relation between individual and collective subjectivities and politics. Foregrounds transnational and decolonial challenges to categories such as man/woman, lesbian/gay, straight/queer, transgender, transsexual..

## WGS 439 - Women, Gender and Violence in a Transnational Context

College of Arts and Sciences
3 credit(s) Irregularly
Critical exploration of the relationship between women, gender, and violence within transnational feminist frameworks. This course also examines women ¿s experiences of, participation in, and resistance to different forms of violence.

## WGS 441 - Topics in Feminist Philosophy

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: PHI 441
Feminist approaches to traditional philosophical questions in various areas, including epistemology, ethics, metaphysics, and philosophy of science. Use of philosophical tools and methods on questions regarding the subordination of women.

## WGS 444 - Schooling \& Diversity

College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: CFE 444
Construction of diversity (race, ethnicity, gender, nationality, class, disability, sexual orientation) in schools. Emergence of inequalities based on difference in pedagogy and curriculum. Student resistance in relation to cultural diversity. Teaching for empowerment.

## WGS 445 - The Caribbean: Sex Workers, Transnational Capital, and Tourism

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: AAS 445, SOC 445 Double Numbered with: WGS 645 A political economy approach to educating students about the human and capital costs of tourism to the Caribbean. The integral relationship between sex work and Caribbean tourism exposes the region's development that has resulted in its current configuration.

## WGS 447-Sexualities and Genders in World Teen Culture

## College of Arts and Sciences

3 credit(s) Irregularly Crosslisted with: QSX 447
How teenagers in both U.S. and non-U.S. cultures are transforming their genders and sexual identities in response to the women's and lesbian/gay/bisexual/transgender liberation movements.

## WGS 449 - Women in Art

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: HOA 440
Representation of women in art from prehistoric to contemporary times and the works of women artists in historical contexts.

## WGS 451 - Visual Culture Past and Present: Gender, Religion and Politics

## College of Arts and Sciences

3 credit(s)
Crosslisted with: CRS 451, HST 451, REL 451
Offered only in Florence. Contemporary visual culture; its representation of gender, religion, and politics and the origins of that representation in a pictorial language first codified in Italy and Europe between circa 1450 and 1650.

## WGS 452 - Feminism and Postcolonial Studies <br> College of Arts and Sciences <br> 3 credit(s) At least 1x fall or spring

Double Numbered with: WGS 652
Critical exploration of the relationship between women, gender, and violence within transnational feminist frameworks. This course also examines women ¿s experiences of, participation in, and resistance to different forms of violence. Additional work required of graduate students. PREREQ: WGS 101 OR WGS 201 OR WGS 301 OR WGS 310 OR WGS 410

WGS 453 - Feminisms, Sexualities, and Human Rights in Middle Eastern Societies

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: MES 453, QSX 453
Focuses on the centrality of gender and sexuality to the politics of everyday life by mapping women's rights movements, LGBT Mobilizations, and minority activisms in the Middle East.

## WGS 454 - Family and Gender in Contemporary Italy

## College of Arts and Sciences

3 credit(s)
Crosslisted with: HST 454, SOC 454
Family structures and gender relations in Italy from the Unification to the present. Offered only in Florence.

## WGS 455 - Culture and AIDS

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: ANT 455
Double Numbered with: WGS 655
Relationship between AIDS and cultures in which it spreads. Cultural practices and sexuality and social effects of widespread AIDS, including healthcare in Asia, Africa, Latin America, and USA. Additional work required of graduate students.

## WGS 456 - LGBT Studies in Sociology

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: QSX 456, SOC 456
Recent sociological research in lesbian, gay, bisexual, and transgender studies addressing sexuality, identity, community, representation, politics, social change and their inter-relations.

## WGS 457 - Gender, Politics, Society in Europe (1400-1800)

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HST 457, SOC 457
Relationship between the sexes in politics, philosophy, literature, and art. Emergence of a dissident "voice" relative to gender identity and social role, with implications for race and religion. Offered only in Florence.

## WGS 462 - Culture and Reproductive Health and Medicine

College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ANT 462, HTW 462
Cultural anthropological approaches to crosscultural variations in reproductive practices (pregnancy, childbirth, infertility, etc.) Impact of globalization, biomedicalization, international development on reproduction and reproductive health. Medical anthropology and gender studies.

## WGS 465 - Beyond the Veil: Gender Politics in Islam

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: MES 465, REL 465, SAS 465 Politics of gender, religious identities, and resistance in the Islamic world. Gender scripts in Qur'anic scripture and Shariah laws. Contemporary realities of Muslim women living in different parts of the world. Additional work required of graduate students.

## WGS 472 - Language, Culture, and Society

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: ANT 472, LIN 472
Double Numbered with: WGS 672
Cross-cultural survey of the role of language in culture and society, including cognition and language usage along the dimensions of class, gender, race, ethnicity, and social status.

## WGS 473 - Women, Rap and Hip-Hop Feminism

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: HOM 473
Double Numbered with: WGS 673
Links between feminism, rap music and hip-hop culture. We explore the work of actual women in hip-hop, images of women, and feminist critiques of the music and the culture. Additional work required of graduate students.

## WGS 475 - Women, Myth and Nation in Latin American Literature

## College of Arts and Sciences

3 credit(s)
Crosslisted with: LAS 475, SPA 475
Myths about women and nation. Modern interpretations and reconstructions of these myths in contemporary literature by Latin American women writers. Literary texts with theories on myth. Representation and "real" constructions of feminine and national identities in different regions of Latin America.

WGS 479 - Power, Conflict, Violence, and the Family
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: CFS 479
Introduction to power and conflict in intimate and familial relations. Neglect, abuse, molestation, rape, battering, and violence.

## WGS 480 - International Course

College of Arts and Sciences
1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## WGS 490 - Independent Study

## College of Arts and Sciences

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## WGS 492 - Work and Inequality

## College of Arts and Sciences

3 credit(s) Irregularly
Crosslisted with: SOC 492
Current and past issues in research and policy concerning inequalities associated with work. Social construction and structural arrangements of work in American society.

## WGS 494 - Music and Gender

College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: HOM 494
The impact of gender ideology and behavior on the performing arts and the role of performance in maintaining and subverting gender identities and relations.

## WGS 498 - Senior Project in Women's \& Gender Studies

## College of Arts and Sciences

3 credit(s) Every semester
For senior women's and gender studies majors graduating with distinction. Individualized and small group mentoring and directed research culminating in an independent project. Permission of department.

## WGS 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## WGS 500 - Selected Topics

## College of Arts and Sciences

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## WGS 512 - African American Women's History

## College of Arts and Sciences

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: AAS 512
The intellectual, political, and social history of African American women from pre-colonial Africa to the re-emergence of black feminism in the late 20th-century United States.

## WGS 513 - Toni Morrison: Black Book Seminar

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: AAS 513
A multi-dimensional study of Morrison's bookwork: fiction, non-fiction, and scholarship. Involves conceptual frameworks and ideas that link this project with broader understandings and interpretations of Blacks in the world. A wide range of questions (i.e., aesthetics, feminisms, knowing-politics, language, race) derives from Morrison's literary witnessing of Black community life.

## WGS 525 - Economics and Gender

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Crosslisted with: ECN 525
Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.

## WGS 553 - Women and Social Change

## College of Arts and Sciences

3 credit(s) Even Academic Yr e.g. 2004-5 Crosslisted with: ANT 553
Function of changes in women's roles in sociocultural urbanization, revolution, and modernization. Women in Third World countries compared to women in industrialized countries.

## WGS 555-Food, Culture and <br> Environment

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: NSD 555
Understand the environment in which nutrition education and communication occur. The broader environment includes cultural diversity, the food system from farm to table, as well as functionality of food components.

## WGS 576 - Gender, Place, and Space

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: GEO 576
Contemporary debates in feminist geography on the gendered construction of space and the spatial construction of gender.

## Writing Program

## WRT 104 - Introduction to CollegeLevel Writing

## College of Arts and Sciences

3 credit(s) Irregularly
College-level reading and writing practices: learning to compose for college audiences, to read challenging texts actively, to make interpretations and claims, and to collaborate with others. Does not substitute for WRT 105.

## WRT 105 - Studio 1: Practices of Academic Writing

## College of Arts and Sciences

3 credit(s) Every semester
Study and practice of writing processes, including critical reading, collaboration, revision, editing, and the use of technologies. Focuses on the aims, strategies, and conventions of academic prose, especially analysis and argumentation.

## WRT 109 - Studio 1: Practices of Academic Writing (Honors)

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Intensive version of WRT 105 for students of demonstrated exceptional ability.

## WRT 114 - Writing Culture

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Nonacademic writing; creative nonfiction, memoir, the essay. Students write texts experimenting with style, genre, and subject; read contemporary nonfiction texts by varied authors; attend lectures/ readings of visiting writers.

## WRT 120 - Writing Enrichment

## College of Arts and Sciences

1-3 credit(s) Every semester
Special instruction in writing, graded on pass/ fail basis. Does not substitute for WRT 105 or 205.
Permission of instructor.
Repeatable

## WRT 205-Studio 2: Critical Research and Writing

College of Arts and Sciences
3 credit(s) Every semester
Study and practice of critical, research-based writing, including research methods, presentation genres, source evaluation, audience analysis, and library/online research. Students complete at least one sustained research project.
PREREQ: CAS 100 OR WRT 105 OR WRT 109 OR ENL 211

## WRT 207 - Writing in the Workplace

## College of Arts and Sciences

3 credit(s) Irregularly
Introduction to workplace writing genres. Emphasis placed on understanding audience needs during the planning and revision process, as well as editing for clarity and impact. Provides students with useful tools for enhancing all workplace communications. This course is available only online.

## WRT 209 - Studio 2: Critical Research

 and Writing (Honors)College of Arts and Sciences
3 credit(s) At least 1x fall or spring Intensive version of WRT 205 for students of demonstrated exceptional ability. PREREQ: CAS 100 OR WRT 105 OR WRT 109

## WRT 220 - Writing Enrichment

## College of Arts and Sciences

1-3 credit(s) Every semester
Special instruction in writing, graded on a pass/ fail basis. Does not substitute for WRT 105 or 205. Permission of instructor.

Repeatable

## WRT 255 - Advanced Argumentative Writing

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Intensive practice in the analysis and writing of advanced arguments for a variety of settings: public writing, professional writing, and organizational writing. PREREQ: ENL 213 OR COREQ: WRT 205 OR WRT 209

## WRT 280 - International Course

## College of Arts and Sciences

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## WRT 301 - Advanced Writing Studio: Civic Writing

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Practical skills necessary for effective civic or advocacy writing. Examines the nature of public(s) and applies theoretical understandings to practical communication scenarios. Junior standing.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 302 - Advanced Writing Studio: Digital Writing

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring Writing in digital environments. May include document and web design, multimedia, digital video, web logs. Introduction to a range of issues, theories, and software applications relevant to such writing.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 303 - Advanced Writing Studio: Research and Writing

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Sustained research and writing project in a student's field of study or area of interest. Analysis of the rhetorics and methodologies of research. PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 307 - Advanced Writing Studio: Professional Writing

## College of Arts and Sciences

3 credit(s) Every semester
Professional communication through the study of audience, purpose, and ethics. Rhetorical problem-solving principles applied to diverse professional writing tasks and situations.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 308 - Advanced Writing Studio: Syle

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Study and experiment with contemporary writing styles, designs, and editing conventions. Practice
writing in multiple genres for different audiences, purposes, and effects. Explore rhetorical, aesthetic, social, and political dimensions of style. PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 320 - Writing Enrichment

## College of Arts and Sciences

1-3 credit(s) Every semester
Special instruction in writing, graded on a pass/ fail basis. Does not substitute for WRT 105 or 205.

Repeatable

## WRT 331 - Peer Writing Consultant Practicum

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Introduction to theories and methods of writing consultation. Topics include: social dynamics, grammar, ESL, LD, argumentation, critical reading, writing process. Practices: observations, role playing, peer groups, one-on-one. Writing intensive.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 340 - Advanced Editing Studio

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Students will produce INTERTEXT, an anthology of student writing in the Writing Program. This extensive editorial project will include: processing manuscripts, production of the anthology, marketing, and public relations tasks. Permission of instructor.
PREREQ: WRT 205 OR WRT 209 OR ENL 213 Repeatable

## WRT 401 - Advanced Workshop in Technical Communications: Design Methodology

## College of Arts and Sciences

2 credit(s) At least 1 x fall or spring Advanced technical communications for pre-professional computer and electrical engineers. Focuses on the communication that engineering design teams perform. Emphasis on communication embedded in system analysis and design processes.
PREREQ: (CAS 100 OR WRT 105 OR WRT 209 OR ENL 211) AND (WRT 205 OR WRT 209 OR ENL 213)

WRT 402 - Advanced workshop in Technical Communication: Prototyping and Construction

## College of Arts and Sciences

1 credit(s) At least 1 x fall or spring Advanced technical communications for preprofessional computer and electrical engineers. Focuses on a range of communication activities
embedded in the development, testing, and deployment phases of engineering projects. PREREQ: (CAS 100 OR WRT 105 OR WRT 109 OR ENL 211) AND (WRT 205 OR WRT 209 OR ENL 213) AND WRT 401

## WRT 413 - Rhetoric and Ethics

## College of Arts and Sciences

3 credit(s) Every semester
Introduces historical conversations concerning rhetoric's ethical responsibilities and explores complications that emerge as assumed historic connections between language and truth, justice, community, and personal character are deployed in various social, political, cultural, national, and transnational contexts.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 417 - Technical Documentation \& Usability

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: WRT 617
Builds on technical writing fundamentals, focusing on practical techniques and extensive practice designing and writing technical product/process documents. Includes audience assessment, task analyses, use-case scenarios, usability testing, and end-use documentation. Additional work required of graduate students.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 419 - Advanced Technical Writing Workshop

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: WRT 619
Intensive experience in writing technical texts. Additional work required of graduate students. PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 422 - Studies in Creative Nonfiction

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Particular topics in the analysis and practice of creative nonfiction. Attention to cultural contexts and authorship. Possible genres include memoir, travel writing, nature writing, experimental or hybrid writing, and the personal essay. PREREQ: WRT 205 OR WRT 209 OR ENL 213 Repeatable 1 time(s), 6 credits maximum

## WRT 423 - African American Rhetoric

## College of Arts and Sciences

3 credit(s) Irregularly
Examines the debates, strategies, styles, and forms of persuasive practices employed by African Americans with each other, and in dialogue within the United States.

## WRT 424 - Studies in Writing, Rhetoric, Identity

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring
Particular topics in the relations among identity, culture, and power in writing and rhetoric. How writing identities emerge in relation to cultural constructions of race, nationality, ethnicity, gender, sexuality, aging, disability.
PREREQ: WRT 205 OR WRT 209 OR ENL 213
Repeatable 1 time(s), 6 credits maximum
WRT 426 - Studies in Writing, Rhetoric, and Information Technology

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Particular topics in the study of technologymediated communication, emphasizing digital discourses and culture. Includes practice and analysis of new genres and rhetorics with attention to their social and political meaning, contexts, and use.
PREREQ: WRT 205 OR WRT 209 OR ENL 213
Repeatable 1 time(s), 6 credits maximum

## WRT 427 - Emerging Technologies in Professional \& Technical Writing

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: WRT 627
An advanced technical writing course focusing on project management and writing that development teams perform regularly, with emphasis on digital writing, site architecture, and assessment/ implementation of emerging technologies. Additional work required of graduate students. PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 428 - Studies in Composition, Rhetoric and Literacy

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring
Particular topics in the theories and studies of writing, including style, community literacy, authorship, and rhetorical genres. Places writing in historical and cultural contexts.
PREREQ: WRT 205 OR WRT 209 OR ENL 213 Repeatable 1 time(s), 6 credits maximum

## WRT 430 - Advanced Experience in Writing Consultation

## College of Arts and Sciences

3 credit(s) At least 1x fall or spring Continuation of consultant experience of WRT 331. Work independently consulting in their majors or the Writing Program. PREREQ: (WRT 205 OR WRT 209 OR ENL 213) AND WRT 331

Repeatable 1 time(s), 6 credits maximum

## WRT 436 - Feminist Rhetoric(s)

## College of Arts and Sciences

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CRS 436, WGS 436
Feminist rhetoric from both a historical and global context, utilizing both primary and secondary readings in order to gain a sense of breadth and depth in the field of feminist rhetoric. Additional work required of graduate students.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 437 - Rhetoric and Information Design

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: WRT 637
Focuses on visual presentation of scientific and technical information, with emphasis on rhetorical approaches, design technologies, and digital presentation of finished work. Additional work required of graduate students.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 438 - Advanced Creative Nonfiction

## College of Arts and Sciences

3 credit(s) Irregularly
Advanced theory and practice of writing interdisciplinary nonfiction in historical, political, cultural, and ethical contexts. Produces creative nonfiction as modes of intellectual inquiry and as scholarship within academic disciplines.
Additional work required of graduate students.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 440 - Studies in the Politics of Language and Writing

## College of Arts and Sciences

3 credit(s) At least 1 x fall or spring Language and writing as sites of political contestation in local, national, and global contexts. Explores policy initiatives, theoretical debates, and effects of politics and history on language and writing in communities.
PREREQ: WRT 205 OR WRT 209 OR ENL 213
Repeatable 1 time(s), 6 credits maximum

## WRT 447 - Professional \& Technical Writing in Global Contexts

## College of Arts and Sciences

3 credit(s) Irregularly
Double Numbered with: WRT 647
Complexities arising in writing technical documents for a wide range of audiences, including other cultures and workplaces both domestically and internationally. Addresses ways that systems of knowledge, interfaces, design processes, and instructional mechanisms affect
users.
PREREQ: WRT 205 OR WRT 209 OR ENL 213

## WRT 470 - Experience Credit

## College of Arts and Sciences

1-6 credit(s) Irregularly
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
PREREQ: WRT 205 OR WRT 209 OR ENL 213
Repeatable

## WRT 495 - Senior Research Seminar I

## College of Arts and Sciences

1 credit(s) At least 1 x fall or spring
Workshop provides students with collaborative environment to develop a proposal for a major project over an extended period. Typical activities: discussing project foci, drafting and workshopping. project proposals, conducting research, discussing audience considerations, making periodic presentations. Department consent.

## WRT 496 - Senior Research Seminar II

## College of Arts and Sciences

2 credit(s) At least 1x fall or spring Workshop provides students with collaborative environment to develop a major project over an extended period. Typical activities: discussing project foci, drafting and workshopping project proposals, conducting research, discussing audience considerations, making periodic presentations.
PREREQ: WRT 495

## WRT 499 - Honors Capstone Project

## College of Arts and Sciences

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## College of Arts and Sciences Faculty

Ahmed E. Abdel-Meguid, Assistant Professor Ph.D. Emory University, 2011
Islamic theology and philosophy; German transcendental philosophy, phenomenology, and hermeneutics.

Omanii Abdullah, Adjunct Instructor
M.A., University of Tennessee-Knoxville, 1974 Poetry

Meera Adya, Director of Research, Burton Blatt Institute, College of Law
Ph.D., University of Nebraska-Lincoln, 2004; J.D.,

University of Nebraska-Lincoln, 2002
Affiliated Faculty, Psychology; Lawpsychology, decision-making, employment discrimination, genetic discrimination, disability

Lois Agnew, Associate Professor, Writing Program Ph.D., Texas Christian University, 1999 History of rhetoric and composition studies, classical and British rhetorical theories, ethics and public discourse, stylistics, rhetoric and philosophy, rhetoric, composition
R. Craig Albertson, Assistant Professor, Biology Ph.D., University of New Hampshire, 2002 Developmental Biology, quantitative genetics, comparative vertebrate morphology
Seth Aldrich, Adjunct Assistant Professor Ph.D., Syracuse University, 1990

Christine Allen, Adjunct Assistant Professor Ph.D., Pennsylvania State University, 1987

David M. Althoff, Assistant Professor
Ph.D., Washington State University, 1998
Species interactions, molecular ecology, insect community ecology

Ran Dani Anbar, Adjunct Assistant Professor M.D., University of Chicago, 1983

Douglas R. Anderson, Professor Emeritus Ph.D., Yale University, 1966
Algebraic topology
Kevin Antshel, Associate Professor and Director of Clinical Training
Ph.D., University of Kentucky
Developmental psychopathology with particular emphasis on attention deficit/hyperactivity disorder (ADHD) and autism spectrum disorders (ASD). Cognitive/behavioral interventions designed to improve functioning in these populations.

Cristian Armendariz-Picon, Associate Professor Ph.D., Ludwig-Maximilians Universitat, Munich (Germany), 2001 Cosmology, relativity, elementary particles, theory

Philip P. Arnold, Associate Professor
Ph.D., University of Chicago, 1992
History of Religions, Indigenous Traditions of the Americas

Marina Artuso, Professor
Ph.D., Northwestern University, 1986
Elementary particles, experiment
Carol Babiacki, Associate Professor
Ph.D., University of Illinois, 1991
Art and Music Histories: Ethnomusicology, South
Asian music and dance, ethnic and immigrant
music and dance in the U.S., music of the Middle East
A. Balachandran, Joel Dorman Steele Professor of Physics
Ph.D., Madras University, 1962
Elementary particle theory

Suzanne L. Baldwin, Michael G. and Susan T.
Thonis Professor of Earth Sciences
Ph.D., State University of New York at Albany, 1988
Mineralogy, petrology, thermochronology, tectonics
Stefan Ballmer, Assistant Professor
Ph.D. MIT , 2006
Theoretical Astrophysics, gravitational Waves
Uday Banerjee, Professor
Ph.D., University of Maryland, 1985
Numerical solutions of differential equations
Crystal Bartolovich, Associate Professor, English Ph.D., Emory University, 1993
Marxism, early modern studies, cultural studies
Kenneth Baynes, Professor, Philosophy and Political Science
Ph.D., Boston University, 1987
Social and political philosophy, critical theory, continental philosophy

Dorri Beam, Associate Professor, English
Ph.D., University of Virginia, 2001
Nineteenth-century American literature and culture, gender and sexuality studies, race and nineteenth-century American literature

Frederick C. Beiser, Professor
D.Phil., Oxford University (United Kingdom), 1980

Early modern philosophy, Kant, German idealism, 19th Century Philosophy

John M. Belote, Professor
Ph.D., University of North Carolina, Chapel Hill, 1979
Developmental genetics, genetic and molecular analysis of sex determination in Drosophila
Patrick W. Berry, Assistant Professor, Writing Program
Ph.D., University of Illinois at Urbana-Champaign, 2011
Literacy Studies; Qualitative Research Methods; Computers and Writing; Teacher Education; Cultural Historic Activity Theory; Higher Education in Prison; Professional Writing and Publishing; and Histories of Rhetoric \& Composition
Tej K. Bhatia, Professor
Ph.D., University of Illinois, 1978
Hindi, linguistics; Indic languages, literature, and linguistics

Himika Bhattacharya, Assistant Professor
Ph.D., University of Illinois at Urbana Champaign, 2008
Feminist Theory, Third World and Transnational Feminisms, Feminist Ethnography
Marion E. Bickford, Professor Emeritus Ph.D., University of Illinois, 1960
Petrologist and isotope geochemist
Benita A. Blachman, Trustee Professor; Coordinator, Learning Disabilities Ph.D., University of Connecticut, 1981 Educational psychology, reading and other learning disabilities, teacher preparation

Marlene F. Blumin, Associate Professor; Director, Study Skills Program
Ph.D., Cornell University, 1988
Curriculum and instruction, college reading/study skills

Steven Blusk, Professor
Ph.D., University of Pittsburgh, 1995
Experimental high-energy physics
Philip N. Borer, Professor
Ph.D., University of California, Berkeley, 1972
Biophysical chemistry, nucleic acid chemistry, nuclear magnetic resonance analysis of RNA, DNA and peptides
Molly Bourne, Adjunct Faculty, Florence Harvard University, Ph.D., Specialist in Gonzaga court circa 1500; artistic patronage, villa design, cartography, and the domestic interior in Renaissance Mantua

Mark Bowick, Professor
Ph.D., California Institute of Technology, 1983 Condensed matter theory

Benjamin Bradley, Associate Professor Ph.D., University of Massachusetts, Amherst, 1999 Ethical theory, environmental ethics, philosophy of death
Mark S. Braiman, Professor
Ph.D., University of California, Berkeley
Solar photoreduction of carbon dioxide for carbon sequestration and energy storage; membrane protein expression, purification, and crystallization; time-resolved vibrational spectroscopy applied to photochemical systems.
Zachary J. Braiterman, Professor
Ph.D., Stanford University, 1995
Modern Jewish thought and culture specializing in 20th-century thinkers, religion, art
Susan Branson, Associate Professor
Ph.D., Northern Illinois University, 1992
Early American History
Collin G. Brooke, Associate Professor, Writing Program
Ph.D., University of Texas at Arlington, 1997
Rhetorics of technology, histories and theories of rhetoric, critical theory
Amanda Brown, Associate Professor
Ph.D., Boston University, 2007
Languages, literatures, and Linguistics, applied linguistics

Danielle Brown, Assistant Professor
Ph.D., New York University, 2009
Caribbean; Latin American music
Duncan Brown, Associate Professor
Ph.D., University of Wisconsin-Milwaukee, 2004
Theoretical astrophysics, relativity
Erella Brown, Instructor
Ph.D., Cornell University, 1989
Modern and postmodern Jewish, Israeli,

European, and American prose fiction, drama, and contemporary literary theory.
Stuart Scott Brown, Professor
Joan Bryant, Associate Professor
Ph.D., Yale University, 1996
American religious history
Gail Bulman, Associate Professor
Ph.D., Syracuse University, 1996
Spanish, 20th-century Latin American literature
Patricia Burak,
Michael Burkard, Associate Professor, English M.F.A., University of Iowa, 1973

Creative writing, poetry
Virginia Burrus, W. Earl Ledden Professor Ph.D., Graduate Theological Union, 1991 Ancient Christianity including: gender, sexuality, the body; martyrdom and asceticism; ancient novels and hagiography; constructions of orthodoxy and heresy; histories of theology and historical theologies
Dympna Callaghan, William Safire Professor of Modern Letters, English
Ph.D., Sussex University, 1986
Feminism, early modern culture, and theory
Horace Campbell, Professor, African American Studies and Political Science
Ph.D., Sussex University, 1979
Comparative politics of Africa and the Caribbean, armaments culture, political economy
Kate B. Carey, Professor
Ph.D., Vanderbilt University, 1985
Substance abuse, stress and coping processes, mentally ill chemical abusers
Michael P. Carey, Professor
Ph.D., Vanderbilt University, 1986
Sexual dysfunctions, health psychology, HIV prevention
Robert Carey, Adjunct Associate Professor Ph.D., University of Chicago, 1966
Jeffrey S. Carnes, Associate Professor
Ph.D., University of North Carolina, 1986
Greek poetry, mythology and Augustan Rome
Linda Carty, Associate Professor
Ph.D., University of Toronto (Canada), 1989
Race, class, and gender studies; comparative sociology; international development postcolonial discourse; Third World feminisms
Carlos Castañeda, Assistant Professor
PhD., Johns Hopkins University, 2009
Biophysics, biophysical chemistry, protein structure, dynamics and function, posttranslational modifications, chemical biology, structural biology, nuclear magnetic resonance of proteins and protein complexes, neuroscience
Luis Castañeda, Assistant Professor of Art History Ph.D., Institute of Fine Arts, New York University, 2011

Latin American Art, Art \& Design in the Americas
Theo Cateforis, Associate Professor
Ph.D., State University of New York at Stony
American music, 20th-century music, popular music, jazz
Simon Catterall, Professor
Ph.D., Oxford University (United Kingdom), 1988
Elementary particles, theory, computational physics
Joseph Chaiken, Professor
Ph.D., University of Illinois, 1982
Physical chemistry, inter-/intramolecular energy transfer, molecular beam/laser spectroscopy, laser chemistry, fractals, coalescence growth systems, biomedical spectroscopy
Arindam Chakraborty, Associate Professor Ph.D., University of Minnesota, 2005
Theoretical and computational investigation of energy conversion processes in quantum dots and solar cells; electrochemical processes on metal surfaces; development of quantum mechanical methods for nuclear and electronic dynamics; applications to materials and biomolecules

## Samuel H.P. Chan, Professor

Ph.D., University of Rochester, 1970
Mitochondrial membrane complexes,
bioenergetics in normal and tumor tissues
Pinyuen Chen, Professor
Ph.D., University of California, Santa Barbara,

## 1982

## Statistics

John D. Chisholm, Associate Professor
Ph.D., University of California, Irvine, 2000
Organic chemistry, medicinal chemistry, synthesis, catalysis.
Daniel Clark, Associate Professor
Ph.D., SUNY Buffalo, 2008
Organic and organometallic chemistry; catalytic
reaction development; natural product synthesis
Heather Coleman, Assistant Professor
PhD, University of British Columbia, 2008
Genetic and environmental control of cell wall formation, biotechnology, molecular farming, functional genomics
Dan Coman, Professor
Ph.D., University of Michigan, 1997
Several complex variables
Sally Cornelison
Ph.D., Courtauld Institute of Art, University of London, 1998
Italian Renaissance Art
Catherine A. Cornwell, Associate Professor
Ph.D., Massachusetts Institute of Technology 1975
Neurobiology of learning and memory
J. Theodore Cox, Professor

Ph.D., Cornell University, 1976
Probability

Amy H. Criss, Assistant Professor
Ph.D., Indiana University, 2004
Human memory; mathematical modeling
Pedro Cuperman, Professor
Licenciadro, University of Buenos Aires
(Argentina), 1966
Spanish, Latin American literature, critical theory, semiotics

James C. Dabrowiak, Professor
Ph.D., Western Michigan University, 1970
Metallo-drugs, metals in medicine, drug delivery,
drug-nucleic acid interactions
Jonathan Dee, Assistant Professor, English
B.A., Yale, 1984

Creative writing, fiction
Jeanne Denti, Visiting Assistant Professor of Psychology
Ph.D., Syracuse University, 1989
Eating disorders, abnormal and clinical psychology.
Steven Diaz, Professor
Ph.D., Brown University, 1982
Algebraic geometry
Pedro DiPietro, Assistant Professor
Ph.D. in Philosophy, Binghamton University, SUNY, 2012
Areas of Study: Women's, Gender, and Queer
Studies; Latina/o Studies; Feminist Philosophy; Philosophy of Race, Gender, and Sex; Women of Color Epistemologies Areas of Concentration: Comparative Ethnic Studies; Critical Theory; Andean and Mesoamerican Cosmologies
Joseph W. Ditre, Assistant Professor of Psychology Ph.D., University of South Florida
Health Psychology, Behavioral Medicine,
Addiction/Addictive Behaviors and Chronic
Physical and Mental Health Disorders
David Kwame Dixon, Assistant Professor
Ph.D., Clark-Atlanta University, 1996
International relations/comparative polits,
political economy and American government
Laurinda Dixon, Professor
Ph.D., Boston University, 1980
Northern Renaissance painting, relationships
between art and science
Helen M. Doerr, Laura J. and L. Douglas Meredith Professor
Ph.D., Cornell University, 1994
Secondary mathematics education, teacher and student learning, mathematical modeling, and mathematical communication.
Karen Doherty, Professor
Ph.D., University of Wisconsin-Madison, 1994
Audiology, psychoacoustics, hearing aids, speech perception
Steve Dorus, Associate Professor
Ph.D., T he University of Chicago, 2004
Evolutionary genetics and genomics of
reproductive systems
Sharon Dotger, Associate Professor Ph.D., North Carolina State University, 2006 Science teacher education, inclusive science education

Janice Dowell, Associate Professor of Philosophy Ph.D., University of Pittsburg, 2002
Philosophy of language, metaphysics, philosophy of mind, metaethics
Robert P. Doyle, Professor
Ph.D., University of Dublin, Trinity College, 2002,
Anderson Foundation Fellow, Yale University, 2004
Peptide conjugate chemistry, biochemistry, oral drug development
Marvin Druger, Laura J. and L. Douglas Meredith Professor Emeritus
Ph.D., Columbia University, 1961
Science teacher education, general biology instruction, evolutionary genetics

Kishi Animashaun Ducre, Assistant Professor
Ph.D., University of Michigan, 2005
Environmental justice
Jerome B. Dusek, Professor
Ph.D., University of Illinois, 1969
Self-concept and identity development in
adolescence, sex roles, coping with stress
Collette P. Eccleston, Assistant Professor
Ph.D., University of California, Santa Barbara, 2005
Stigma, prejudice, and discrimination; motivation; coping; intergroup relations
Tanya L. Eckert, Associate Professor; Director, Graduate Training Program in School Psychology Ph.D., Lehigh University, 1996
Assessment of academic and behavioral problems, school-based interventions, acceptability of assessment procedures

Susan Edmunds, Professor, English
Ph.D., Yale University, 1991
Twentieth-century American literature, modernism, African American literature, theories of the body

Kevan Edwards, Assistant Professor
Ph.D., Rutgers University, 2006
Philosophy of mind, philosophy of language, cognitive science
Mary Louise Edwards, Professor
Ph.D., Stanford University, 1979
Phonetics, phonology, articulation, phonological development and disorders
Scott E. Erdman, Associate Professor Ph.D., University of California, Davis, 1994
Regulation of cell differentiation
Kathryn Everly, Associate Professor
Ph.D., University of Texas, 2000
Contemporary Peninsular Spanish literature,
Catalan literature and women writers
Craig K. Ewart, Professor

Ph.D., Stanford University, 1978
Health psychology, behavioral medicine, psychophysiology
Carol Fadda-Conrey, Associate Professor, English
Ph.D., Purdue University, 2006
U.S. ethnic literatures, Arab American studies

Ji Ji Fan, Assistant Professor
Ph.D., Yale University, 2009
Particle phenomenology, supersymmetry
Stephanie A. Fetta, Assistant Professor
Ph.D., University of California, Irvine, 2008
Chicana/o and Latina/o literatures from a hemispheric perspective
Gareth J. Fisher, Associate Professor Ph.D., University of Virginia, 2006
Buddhism, Chinese Buddhism, contemporary religion, globalization
Paul G. Fitzgerald, Professor, Earth Sciences, Associate Dean of Science Mathematics and Research
Ph.D., University of Melbourne (Australia), 1988
Tectonics, Low temperature thermochronology (fission track, U-T h/He)

Arthur Flowers, Associate Professor, English
B.A., City University of New York, 1979

Creative writing, fiction
Thomas P. Fondy, Professor
Ph.D., Duquesne University, 1961
Cancer biology and cancer chemotherapy, drug resistance and host immune response in cancer, liposomal drug formulations in experimental cancer treatment, animal models in cancer research

Chris Forster, Assistant Professor, English Ph.D., University of Virginia, 2011
Modernism, British twentieth century literature and culture, digital humanities

Martin B. Forstner, Assistant Professor
Ph.D. University of Texas, Austin, 2003
Biophysics, experimental soft condensed matter, biophotonics

Kenneth Foster, Professor
Ph.D., California Institute of Technology, 1972
Biophysics of rhodopsin-based photoreceptors
Rodney Foster, Assistant Professor
Ph.D., Syracuse University, 1998
Eighteenth-century music
Wayne Franits, Professor
Ph.D., Institute of Fine Arts, New York University, 1987
Baroque art, 17th-century Dutch painting
Douglas A. Frank, Professor
Ph.D., Syracuse University, 1990
Plant and ecosystem ecology, emphasizing the effects of ungulates on grasslands

Jason D. Fridley, Associate Professor Ph.D., University of North Carolina, Chapel Hill,

2002
Patterns of biodiversity, functional significance of biodiversity for ecological systems
Ken Frieden, B.G. Rudolph Professor Ph.D., Yale University, 1984
Comparative literature, Hebrew and Yiddish fiction; European and American Judaic traditions; psychoanalysis and literary theory

Jannice Friedman, Assistant Professor Ph.D., University of Toronto, 2009 Plant evolutionary biology, ecological genetics, evolution of plant reproductive systems

Kim Frost, Assistant Professor of Philosophy
Ph.D., University of Pittsburgh, 2012
Philosophy of mind, philosophy of action
André Gallois, Professor
B. Phil., University of Oxford, 1971

Epistemology, metaphysics, philosophy of mind, ethics

Myrna Garcia-Calderon, Associate Professor Ph.D., University of California, Berkeley, 1989 Caribbean literature

Anthony Garza, Associate Professor Ph.D., Texas A and M University, 1995 Microbiology, gene expression in development
Les A. Gellis, Visiting Assistant Professor of Psychology
Ph.D., University of Memphis, 2006
Cognitive and behavioral elements that contribute to stress, insomnia, and other sleep disorders. Currently he is testing and designing techniques to treat insomnia while understanding the causes and consequences of sleep problems.

Stefano Giannini, Associate Professor
Ph.D., Johns Hopkins University, 2002 Italian

Casarae Gibson, Assistant Professor of African American Literature
Ph.D., Purdue University, 2015
African American Protest Movements and Civil Unrest between 1964-1992, The Black Arts Movement, themes of resistance in Black women's writing in Jamaica and Salvador de Bahia, Brazil, and Hip Hop Studies
Mark A. Ginsberg, Adjunct Associate Professor
Ph.D., Southern Illinois University, 1975
Hope Glidden , Professor
Ph.D., Columbia University, 1976
French
Ann Grodzins Gold, The Thomas J. Watson Professor of Religion
Ph.D., University of Chicago, 1984
Teaching and research on religion in South Asia,
popular Hinduism, women's expressive traditions, religions and environment, folklore, oral history
Paul Gold, Distinguished Professor of Biology
Mike Goode, Associate Professor, English

Ph.D., University of Chicago, 2001
British Romantic and early Victorian literature and culture, gender studies
Jerry Goodisman, Professor Emeritus
Ph.D., Harvard University, 1963
Physical chemistry, sedimentation and agglomeration, platinum anticancer drugs, light scattering from skin.

Michael Gordon, Adjunct Associate Professor Ph.D., Ohio State University, 1977
Judith Gorovitz, Adjunct Assistant Professor
Ph.D., Case Western Reserve University, 1973
Samuel Gorovitz, Professor
Ph.D., Stanford University, 1963
Ethics, public policy, decision making
Richard M. Gramzow,
Ph.D. University of North Carolina, Chapel Hill, 1997
The self, groups, psychophysiology
Jack E. Graver, Professor
Ph.D., Indiana University, 1966
Combinatorics and graph theory
David Greenberg, Adjunct Associate Professor
Ph.D., Indiana University, 1966
Combinatorics and graph theory
Gerald R. Greenberg, Associate Professor, Associate Dean
Ph.D., Cornell University, 1985
Russian, Slavic linguistics
Roger P. Greenberg, Adjunct Professor
Ph.D., Syracuse University, 1968
Philip S. Griffin, Professor
Ph.D., University of Minnesota, 1982
Probability.
Erika Haber, Associate Professor
Ph.D., University of Michigan, 1993
Russian language and literatures
Rania Habib, Associate Professor
Ph.D., University of Florida, 2008
Languages, Literatures and Linguistics; Linguistics, Arabic, Middle Eastern Studies
F. Reed Hainsworth, Professor

Ph.D., University of Pennsylvania, 1968
Physiological ecology and comparative physiology,
emphasizing energetic relationships in small mammals and birds

## Sarah Hall, Assistant Professor

Roger Hallas, Associate Professor, English
Ph.D., New York University, 2002
Film, documentary, visual culture, LGBT studies
M. Gail Hamner, Professor

Ph.D., Duke University, 1997
Pragmatism, critical theory, women's studies, film, and popular culture
Chris Hanson, Assistant Professor, English
Ph.D., University of Southern California, 2010

Screen studies: new media, television, film, and game studies
John F. Harkulich, Adjunct Assistant Professor
Ph.D., Florida State University, 1979
Brooks Haxton, Professor, English
M.A., Syracuse University, 1981

Creative writing, poetry
Daniel W. Hayes, Assistant Professor
Mark Heller, Professor
Ph.D., Syracuse University, 1984
Metaphysics, epistemology
H. Ernest Hemphill, Associate Professor Emeritus Ph.D., Cornell University, 1967
Microbiology, microbial genetics
James A. Hewett, Associate Professor
Ph.D., Michigan State University, 1991 central nervous system, inflammation, arachidonic acid metabolism, therapeutics, gene expression, cell culture.\}
Sandra J. Hewett, Beverly Petterson Bishop Professor of Neuroscience
Ph.D., Michigan State University, 1992 Mechanisms underlying cell death in the central nervous system: the interplay between excitotoxicity and inflammation

Margaret Himley, Professor
Ph.D., University of Illinois, Chicago, 1983
Composition and critical pedagogy, curriculum design, LGBT studies and queer rhetoric, phenomenological theories of children and childhood

Joseph T. Himmelsbach, Adjunct Associate Professor
Ph.D., Syracuse University, 1972
Gregory D. Hoke, Associate Professor Ph.D., Cornell University, 2006 Geomorphology, sedimentary geology, tectonics
Richard Holmes, Research Assistant Professor
Ph.D., University of Maryland, 1985
Elementary particles, experiment
Jeehee Hong, Assistant Professor
Ph.D. University of Chicago, 2008
Art of China; Arts of East Asia
Peter D. Horn, Assistant Professor
Ph.D., Rice University, 2009
Knot concordance and Heegaard Floer homology
James L. Hougland, Assistant Professor
Ph.D., University of Chicago, 2005
Bioorganic chemistry; biochemistry; enzymology; substrate selection and molecular recognition in protein posttranslational modification
Marc W. Howard, Associate Professor Ph.D., University of Chicago, 1999 Human memory, cognitive neuroscience, mathematical and computational modeling
Rebecca Moore Howard, Professor, Writing

Program
Ph.D., West Virginia University, 1984
Theory of authorship, print culture studies, stylistics, composition history, sociolinguistics, writing across the curriculum, composition pedagogy, writing program administration
William J. Hoyer, Professor
Ph.D., West Virginia University, 1972
Life-span developmental psychology, learning and memory, cognitive aging, and aging
Wu -Teh Hsiang, Emeritus
Ph.D., University of Pennsylvania, 1977
Differential geometry and differential equations
Jay Hubisz, Associate Professor
Ph.D. Cornell University, 2006
Theoretical particle physics, cosmology
Bruce S. Hudson, Professor
Ph.D., Harvard University, 1972
Molecular spectroscopy and biophysical chemistry; inelastic neutron scattering studies of molecular crystals, especially those with unusual hydrogen bonding and comparison with theory; biophysical applications of fluorescence

Marsha A. Hunt, Part-time Instructor J.D., Syracuse University, 1987

Sydney Hutchinson, Assistant Professor Ph.D. New York University, 2008 Ethnomusicology
Richard Ingersoll, Ph.D.
Ph.D., University of California; Berkeley
16th century Italian architecture and survey of Italian urbanism.
Linda C. Ivany, Professor
Ph.D., Harvard University, 1997
Evolutionary paleoecology, paleontology, paleoclimatology, stable isotope paleobiology
Tadeusz Iwaniec, John Raymond French Distinguished Professor of Mathematics at Syracuse University and FiDiPro (Finland Distinguished Professor) at the University of Helsinki.
Ph.D., University of Warsaw, 1975
Geometric Function Theory, Nonlinear Analyses and Partial Differential Equations with applications to Elasticity Theory and Material Sciences.

Mary M. Jackowski, Adjunct Assistant Professor Ph.D., State University of New York Health Science Center, 1979

Mary E. Jeannotte, Adjunct Assistant Professor Ph.D., State University of New York at Buffalo, 1993

Jean Jonassaint, Professor
Ph.D., Universite de Montreal (Canada), 1990
Francophone studies, Haitian novel
Harold Jones, Emeritus
Ph.D., Princeton University, 1968
Spanish golden age literature

Randall S. Jorgenson, Associate Professor Ph.D., University of Kansas, 1983
Health psychology, effects of personality coping, stress and heredity on cardiovascular reactivity
Christopher Junium, Assistant Professor, Earth Sciences
Ph.D., Penn State University, 2010
Paleoclimatology, paleoceanography, geobiology,
and stable isotope and organic geochemistry
Tara Kahan, Assistant Professor
Ph.D., University of Toronto, 2010
Physical chemistry, analytical chemistry,
atmospheric and environmental chemistry,
spectroscopy, developing a molecular-level understanding of physical and chemical processes
occurring at environmental surfaces
Bette Kahler, Instructor
M.Mus., Syracuse University, 1971

Organ performance and instruction, music history and theory

Michael L Kalish, Professor
Ph.D. University of California at San Diego, 1993
Cognitive mechanisms responsible for the nature of human learning and memory, with a particular focus on categorization and dimensional attention.
James Kallmerten, Professor
Ph.D., Brown University, 1979
Organic chemistry, organic synthesis, emphasizing
methods and strategies for the preparation of biologically active natural products and electrooptical materials

Mary Karr, Jesse Truesdell Peck Professor of English Literature
M.F.A., Goddard College, 1980

Creative writing, poetry
Jeffrey A. Karson, Professor, Earth Sciences
Ph.D., State University of New York at Albany, 1977
Structural geology and tectonics
Tazim R. Kassam , Associate Professor Ph.D., McGill University, 1993
History of religions, specializing in Islamic traditions and religions of South Asia

Christa A. Kelleher, Assistant Professor
Ph.D., The Pennsylvania State University, 2013
Hydrology/Hydrogeology
Christopher Kennedy, Associate Professor, English M.F.A., Syracuse University, 1988

Creative writing, poetry
Krista Kennedy, Assistant Professor, Writing Program
Ph.D. University of Minnesota Twin Cities, 2009
Digital Rhetorics, Intellectual Property and
Authorship, Textual Materiality, Technical and
Professional Communication
Marilyn S. Kerr, Assistant Professor
Ph.D., Duke University, 1966
Developmental biology

Hyune-Ju Kim, Professor
Ph.D., Stanford University, 1988 Statistics
Claudia Klaver, Associate Professor, English
Ph.D., Johns Hopkins University, 1995
Nineteenth-century British literature and culture, feminist theory, women's studies, gender studies, and imperialism
Mark Kleiner, Professor
Ph.D., Kiev (USSR) State University, 1972
Representations of finite dimensional algebras
Ivan V. Korendovych, Assistant Professor Ph.D., Tufts University, 2006
Bioinorganic chemistry, biophysics, inorganic chemistry, chemical biology
Jaklin Kornfilt, Professor
Ph.D., Harvard University, 1984
Syntactic theory, typology, German syntax, Turkish and Turkic linguistics

Donna Korol, Associate Professor
Timothy M. Korter, Professor
Ph.D., University of Pittsburgh, 2001
Laser spectroscopy and computational chemistry
Leonid Kovalev, Assistant Professor
Ph.D. Washington University, 2005
geometric function theory
Thomas J. Krisher, Adjunct Assistant Professor Psy.D., Hahnemann University, 1986

Robert Kuehnel, Adjunct Assistant Professor Ph.D., University of Maine, 1988
Matthew LaHaye, Assistant Professor Ph.D. University of Maryland, College Park, 2005
Experimental condensed matter physics
John Laiho, Assistant Professor, Physics
Ph.D., Princeton University, 2004
Lattice QCD, Flavor Physics \& CP Violation, Chiral Pertubation Theory, Lattice Gravity
Gregg Lambert, Associate Professor
Ph.D., University of California at Irvine, 1995
Comparative literature and theory
George M. Langford, Professor
Ph.D., Illinois Institute of Technology, 1971
Cell and molecular biology of the actin cytoskeleton, axonal transport in nerve cells
Larry J. Lantinga, Adjunct Associate Professor Ph.D., University of Nebraska, 1973

Loredana Lanzani, Professor
Ph.D. Purdue University; 1997
Harmonic analysis, PDEs and several complex variables

Laura K. Lautz, Associate Professor
Ph.D., Syracuse University, 2005
Hydrology, hydrogeology
Meera Lee, Assistant Professor
Ph.D., American Studies, Dankook University, 2005
Korean literature and films, Asian American
literature and media. Postcolonial studies.
Graham J. Leuschke, Professor
Ph.D., University of Nebraska, 2000
Algebra, commutative algebra
Lawrence J. Lewandowski, Professor Ph.D., University of Michigan, 1978 School psychology, exceptional children, neuropsychology

Katharine Lewis, Associate Professor, Biology
Ph.D. University College, London 1998
John A. Lindberg Jr., Professor Emeritus
Ph.D., University of Minnesota, 1960
Banach algebras, Banach spaces
Carol Lipson, Professor Emeritus
Ph.D., University of California, Los Angeles, 1971
Rhetoric of ancient cultures before the Greeks, technical communication, science writing
Edward D. Lipson, Professor
Ph.D., California Institute of Technology, 1971
Biophysics, experimental studies of sensory processes

Vincent W. Lloyd, Assistant Professor Ph.D., University of California, Berkeley, 2008 Continental philosophy of religion; trauma theory; political theology.
Soren Lowell, Associate Professor
Ph.D., University of Arizona, 2005
Voice physiology, voice disorders, swallowing, neurolaryngology
Zunli Lu, Assistant Professor
Ph.D., University of Rochester, 2008
Low temperature geochemistry and uses a variety of methods (trace elements, isotopes and models) to investigate crustal fluids, carbon cycle and global environmental changes.
Yan -Yeung Luk, Associate Professor
Ph.D., University of Chicago, 2001
Bio-organic, chemical biology, nanometerscale and biocompatible materials, biosurfaces

Adam Lutoborski, Professor
Ph.D., Polish Academy of Sciences, 1981
Numerical analysis, applied mathematics
Scott Lyons, Associate Professor
Ph.D., Miami University, 2000
Native American literature and rhetoric
Erin S. Mackie, Professor, English
Ph.D., Princeton University, 1994
Restoration and 18th-Century British literature
Diane Kunzelman Magini, Adjunct Restorer, Uffizi
Gallery, Florence History and practice of art restoration
Christine Mahoney, Assistant Professor
Eleanor Maine, Professor
Ph.D., Princeton University, 1984
Developmental genetics, cell-cell interactions
Stephen Maisto, Professor

Ph.D., University of Wisconsin, 1975 Etiology and treatment of alcohol and drug use disorders, treatment and process, outcome evaluation
M. Lisa Manning, Associate Professor, Physics Ph.D., University of California, Santa Barbara, 2008
Defects and deformation in disordered solids and glasses; Surface tension and emergent mechanical properties in developing embryonic tissues; Mitotic waves and pattern formation in biological tissues; Constitutive models for friction and shear banding
M. Cristina Marchetti, William R. Kenan Jr. Professor, Chair Department of Physics
Ph.D., University of Florida, 1982
Condensed-matter theory
Brian K. Martens, Professor
Ph.D., University of Nebraska, Lincoln, 1985
Applied behavior analysis and school consultation
Charles Martin, Visiting Professor
Ph.D., State University of New York at Buffalo, 1987
Poetry
Joanna 0. Masingila, Laura J. and L. Douglas
Merdith Professor
Ph.D., Indiana University, 1992
Teacher learning, capacity building through teacher education.
Matilde M. Mateo, Assistant Professor
Ph.D., University of Santiago de Compostela
(Spain), 1994
Art of Middle Ages, classical art, romantic aesthetics

Vivian M. May, Associate Professor
Ph.D., Emory University, 1997
Feminist epistemologies, African American and
Third World feminist theories, decolonizing the imagination, critical pedagogy, literature and social change
Mathew M. Maye, Associate Professor Ph.D., SUNY Binghamton, 2005
Inorganic chemistry, materials science, nanoscience, biomimetics, self-assembly
Janis A. Mayes, Associate Professor
Ph.D., Brown University, 1975
Francophone, African, Caribbean, and African-
American literatures, literary translation
Terry R. McConnell, Professor
Ph.D., University of Illinois, 1981
Probability, analysis
Kris McDaniel, Professor
Ph.D., University of Massachusetts-Amherst, 2004
Metaphysics, philosophy of religion, ethics
Moira A. McDermott, Assistant Professor
Ph.D., University of Michigan, 1996
Commutative Algebra, Computational Algebra
(M2), Mathematics of Phylogenetics

Thomas McKay, Professor
Ph.D., University of Massachusetts, 1974
Philosophy of logic, philosophy of language, metaphysics

Dennis J. McKillop, Adjunct Assistant Professor Ph.D., University of Arizona, 1984

Alick McLean, Ph.D.
Ph.D., Princeton University School of Architecture Italian Romanesque, Gothic and Renaissance architecture and urban design.
Jeff Meyer, Assistant Professor
Ph.D., University of Illinois, 1997
Number theory, special functions
Stephen Meyer, Associate Professor Ph.D., SUNY Stony Brook, 1996
Eighteenth and 19th century music, history of opera
Alan Middleton, Professor
Ph.D., Princeton, 1990
Condensed matter, theory; computational physics
Claudia Miller, Professor
Ph.D., University of Illinois at Urbana-Champaign, 1997
Commutative algebra
Linda Milosky, Associate Professor Ph.D., University of Wisconsin, Madison, 1986 Language development and disorders, discourse processing, pragmatics, cognition and language
Chandra Talpade Mohanty, Professor Ph.D., Education, University of Illinois, UrbanaChampaign, 1987
Transnational feminist theory, anti-racist pedagogy, post-colonial and third world studies, cultural studies and radical education
Patricia Moody, Associate Professor, English Ph.D., University of Texas at Austin, 1972 English language histories and history of linguistics, Discourse analysis, particularly medieval, Reception of the medieval, and Critical pedagogy

Kevin Morrison, Assistant Professor, English
Ph.D., Rice University, 2009
Victorian literature and culture
Donald E. Morton, Professor, English
Ph.D., Johns Hopkins University, 1971
Marxism, critical and social theory, feminism,
queer theory, cultural studies and cybertheory
Robert Moucha, Assistant Professor, Earth
Sciences
Ph.D., University of Toronto, 2003
Geodynamics, Geophysics and High Performance Computing
Raymond Mountain, Research Assistant Professor Ph.D., Notre Dame, 1992
Elementary particles, experiment
Liviu Movileanu, Associate Professor
Ph.D., University of Bucharest, 1997

## Biophysics

Micere Githae Mugo, Laura J. and L. Douglas Meredith Professor
Ph.D., University of New Brunswick (Canada), 1973
Orature, literature, creative writing, Pan-Africanist studies, education

Henry T. Mullins, Professor
Ph.D., University of North Carolina, Chapel Hill, 1978
Tropical carbonate platforms, oceanography, and the Lacustrine Record of Quaternary climate change in the Finger Lakes and Ireland
Jonathan Nelson, Ph.D.
Ph.D. in Art History, Institute of Fine Arts, New York University
Renaissance art history.
Leonard Newman, Associate Professor; Director, Graduate Training Program in Social Psychology Ph.D., New York University, 1990
Social cognition, social stigma, attitudes, psychology of genocide

Cathryn R. Newton, Professor
Ph.D., University of California, Santa Cruz, 1983 Paleobiology, paleoecology of mass extinctions, environmental stratigraphy

Brice Nordquist, Assistant Professor, Writing Program
Ph.D., University of Louisville, Louisville, 2014
Composition Theory and Pedagogy, Language Diversity, Global Rhetorics, Literacy Studies, Writing Program Administration, Writing Across the Curriculum
Richard M. O'Neill, Adjunct Associate Professor Ph.D., State University of New York at Buffalo, 1983
Dana M. Olwan, Assistant Professor Ph.D., Queens College, 2009
Transnational Feminist Theories of Race, Gender, and Religion; Gendered and Sexual Violence and the Honor Crime; Representations of Arab and Muslim women; Indigenous and Feminist Solidarities.

Jani Onninen, Associate Professor Ph.D., University of Jyvaskyla (Finland), 2002 Nonlinear analysis and geometric function theory
Stephanie Ortigue, Assistant Professor
Ph.D., Geneva University of Medicine and Savoy University, 2004
Implicit perception, self-consciousness and its relationship to social cognition.
Hille Paakkunainen, Assistant Professor
Ph.D., University of Pittsburgh 2011
Ethics, philosophy of action
Tibor Palfai, Professor
Ph.D., University of Waterloo, 1969
Psychopharmacology, effects of drugs on learning and memory

## Aesoon Park, Associate Professor

PH.D., University of Missouri-Columbia, 2006 Longitudinal person-environment interplay on alcohol misuse across emerging and young adulthood.

Stephen Parks, Associate Professor, Writing Program
Ph.D., University of Pittsburgh, 1993
Rhetoric, composition, community literacy/ publishing, language politics, cultural studies
Susan Parks, Assistant Professor
Ph.D., Massachusetts Institute of Technology/
Woods Hole Oceanographic Institution, 2003
Behavioral ecology, acoustic communication, marine science, conservation biology
Joseph Pellegrino, Clinical Assistant Professor Au.D., University of Florida, 2004
Adult audiologic assessments and hearing aids
Melissa Pepling, Associate Professor
Ph.D., State University of New York at Stony Brook, 1995
Mouse germ line development, oogenesis
Susan Pepling, Assistant Professor
Ph.D., Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution, 2003 Behavioral ecology, acoustic communication, marine science, conservation biology
Louise Wetherbee Phelps, Professor Emeritus Ph.D., Case Western Reserve University, 1980 Rhetoric \& composition/writing studies, including theory, method, and disciplinary histories; writing program design and administration; and graduate curriculum and pedagogy.
Scott Pitnick, Professor
Ph.D., Arizona State University, 1992
Microevolutionary processes and
macroevolutionary relationships
Donald Planty, Professor
Britton Plourde, Associate Professor
Ph.D., University of Illinois, Urbana-Champaign, 2000
Condensed matter, experiment
Evgeny Poletsky, Professor
Ph.D., University of Moscow (Russia), 1973
Geometric theory of functions of real and complex variables
Gwendolyn D. Pough, Associate Professor Ph.D., Miami University, Ohio, 2000
African American rhetorical traditions, feminist rhetorics, popular culture, writing, rhetoric, composition, Black feminist theory, public sphere theory, popular culture

Jonathan Preston, Assistant Professor
Ph.D., Syracuse University, 2008
speech sound disorders, persistent articulation difficulties, childhood apraxia of speech

Beth Prieve, Professor

Ph.D., University of Iowa, 1989
Auditory physiology, the diagnosis of hearing loss
Declan Quinn, Professor
Ph.D., University of Wisconsin, 1985
Algebra, algebraic geometry, graph theory
Ramesh Raina, Associate Professor
Ph.D., Jawarharlal Nehru University (India), 1991
Molecular signaling mechanisms between plants and their pathogens

Surabhi Raina, Assistant Professor
Ph.D., Banaras Hindu University, 1992
Plant molecular genetics, biotechnology
Romita Ray, Associate Professor
Ph.D., Yale University, 1999
18th- and 20th-century European and British
Empire art/architecture, South Asian art
Kara Richardson, Associate Professor Ph.D., University of Toronto, 2008
Medieval philosophy, early modern philosophy
Brian Rieger, Adjunct Assistant Professor
Ph.D., Fordham University, 1996
Michael Rieppel
Ph.D., University of California, Berkeley, 2013
Philosophy of language, philosophical logic,
and metaphysics. Properties and predication,
predicative quantification, referential expressions, and attitude reports. The intersection of philosophy of language and philosophy of mind, and in the history of early analytic philosophy.

Ellyn Riley, Assistant Professor
Ph.D., Northwestern University, 2011
Adult acquired neurogenic disorders, particularly aphasia, acquired alexia, and patient-related factors affecting treatment outcomes.
Robin Riley, Assistant Professor
Ph.D., Syracuse University, 2000
Gender, war and militarism, transnational feminism, gender studies and queer theory, feminist international relations theory, feminist methodologies, popular culture, feminist theory, feminist pedagogy

Alicia Rios, Associate Professor
Ph.D., University of Maryland, 1992
Latin American literature and culture
Mark Ritchie, Professor
Ph.D., University of Michigan, 1987
Biodiversity, plant-herbivore interactions, conservation biology
William C. Ritchie, Associate Professor
Ph.D., University of Michigan, 1969
Linguistics, adult second-language learning, applied linguistics
William A. Robert, Assistant Professor
Ph.D., University of California, Santa Barbara, 2005
Continental philosophy of religion; Christianity; mysticism; gender; ethics.

John E. Robertson, Assistant Professor
Ph.D., University of Texas, 1975
Ancient philosophy, Aristotle's metaphysics, philosophy of mind, theory of action

Marcia C. Robinson, Assistant Professor
Ph.D., Emory University, 2001
Christian thought, African American religion and art

Carl Rosenzweig, Professor
Ph.D., Harvard University, 1972
Elementary particle theory, relativistic quantum
field theory, gauge theory, cosmology
Zaline M. Roy-Campbell, Associate Professor Ph.D., University of Wisconsin-Madison Cultural and linguistic diversity, successful schools for African American students

Patricia Roylance, Associate Professor, English
Ph.D., Standford University, 2005
Early American literature and culture
Herbert Ruffin, Associate Professor
Ph.D., Claremont Graduate University, 2007
African American history, U.S. West history, urban history.

Karin Ruhlandt, Distinguished Professor, Dean Dr.rer.nat., Philipps University, Marburg (Germany), 1991
Inorganic and organometallic chemistry,
crystallography, synthesis and structural
characterization of inorganic compounds and their application in synthetic, solid state, and polymer chemistry

John M. Russell, Professor
Ph.D., University of Utah, 1971
Cellular physiology, ion transport, effects of viruses on cellular homeostatic processes
Natalie Russo, Assistant Professor Ph.D., McGill
University, 2007
Autism Spectrum Disorders, ADHD, \& sensory processing disorders.
Scott D. Samson, Professor
Ph.D., University of Arizona, 1990
U-pb geochronology, chemical evolution of the
crust-mantle system, evolution of neoproterozoic
circum-Atlantic erogens
Jureepan Saranak, Research Assistant Professor
Ph.D., Mt. Sinai Medical School, 1981
Biophysics
Peter Saulson, Martin A. Pomerantz '37 Professor in Physics
Ph.D., Princeton University, 1981
Relativity, astrophysics experiment
George Saunders, Professor, English
M.F.A., Syracuse University, 1988

Creative writing, fiction
Douglas J. Scaturo, Adjunct Associate Professor
Ph.D., Claremont Graduate School, 1979
Joseph Schechter, Professor

Ph.D., University of Rochester, 1965
Elementary particle theory
Will Scheibel, Assistant Professor, English
Ph.D., Indiana University, 2014
Film and media studies
Eileen E. Schell, Associate Professor, Writing Program
Ph.D., University of Wisconsin-Milwaukee, 1993
Composition theory, 19th- and 20th-century rhetorical theory, women's rhetoric, feminist theory

## Eric A. Schiff, Professor

Ph.D., Cornell University, 1979
Amorphous and crystalline semiconductors: defects, transport and recombination
Christopher A. Scholz, Associate Professor Ph.D., Duke University, 1989
Sequence stratigraphy, lacustrine and rift basin sedimentation and reflection seismology
Lael J. Schooler, Professor
Ph.D., Carnegie Mellon, 1993
Investigates simple heuristics - decision strategies
that use limited information to make effective decisions in an uncertain world - with computer simulations and behavioral experiments to help explain how people make decisions and how to improve these processes.

Jennifer Schwarz, Associate Professor
Ph.D., Harvard, 2002
Condensed matter theory
Sascha Scott, Assistant Professor
Ph.D, Rutgers University, 2008
19th- and 20th-century American art, art of the
American West, representations of American Indians

Tony Scott, Associate Professor, Writing Program
Ph.D., University of Louisville, 2002
Composition Theory, Political Economics of
Writing, Writing Assessment, Writing Program Administration
Kari A. Segraves, Associate Professor
Ph.D., Vanderbilt University, 2003
Plant-insect interactions, mutualism, coevolution, and phylogenetics
Nathaniel Sharadin
Ph.D. , University of North Carolina at Chapel Hill, 2014
Ethics, epistemology, social and political
philosophy, and aesthetics
Lixin Shen, Professor
Ph.D., Zhongshan University, 1996
Wavelets and image processing
Stephanie Shirilan, Assistant Professor, English Ph.D., Brandeis University, 2009
Seventeenth-century literature and culture
Donald I. Siegel, Professor, Chair, Earth Sciences Ph.D., University of Minnesota, 1981
Regional hydrogeology, wetland hydrogeology,
groundwater geochemistry, Jazz guitarist, chef and raconteur

Robert Silver, Professor
Renate Simson, Part-time Assistant Professor Ph.D., Syracuse University, 1974
Nineteenth-century African American literature
Tomasz Skwarnicki, Professor
Ph.D., Institute of Nuclear Physics, Krakow
(Poland), 1986
Elementary particles, experiment
Bruce Smith, Professor, English
M.A., Bucknell University, 1971

Creative writing, poetry
Joshua M. Smyth, Professor
Ph.D., State University of New York at Stony Brook, 1998
Health psychology/behavioral medicine, stress and coping, psychological interventions

David Sobel, Irwin and Marjorie Guttag Professor of Ethics and Political Philosophy
Ph.D., University of Michigan, 1997
Ethics, political philosophy
Mitchell Soderberg, Assistant Professor
Ph.D. University of Michigan, 2006
Elementary particles, experiment
Paul Souder, Professor
Ph.D., Princeton University, 1971
Medium energy experiments
James T. Spencer, Laura J. and L. Douglas Meredith Professor, Associate Dean, Exec. Dir.
Forensic and National Security Sciences Institute (FNSSI)
Ph.D., Iowa State University, 1984
Inorganic and organometallic-main group cluster
complexes, forensic science, solar energy conversion chemistry, formation of solid state materials, nanostructures and nonlinear optical materials
Dana Spiotta, Associate Professor, English
B.A., Evergreen State College, 1992

Creative writing, fiction
Michael B. Sponsler, Professor
Ph.D., California Institute of Technology, 1987
Organic and organometallic chemistry, liquid crystalline holographic materials
Robert P. Sprafkin, Adjunct Professor Ph.D., Ohio State University, 1968
W. Thomas Starmer, Professor

Ph.D., University of Arizona, 1972
Population genetics, evolutionary biology,
ecological genetics
Sanford Sternlicht, Professor Emeritus
Ph.D., Syracuse University, 1962
Drama, fiction
Sheldon Stone, Professor
Ph.D., University of Rochester, 1972
Elementary particles, experiment

Kevin Sweder, Professor of Practice Ph.D., California Institute of Technology Biochemistry, Biochemical methods in bioforensic and bioterrorism detection, DNA repair mechanisms, and genetic toxicology.

Melody Troeger Sweet, Assistant Professor Ph.D., University of Pennsylvania, 1985
Physiology and molecular biology
Zofia Sztechmiler, Harvey A. Taub, Adjunct Professor
Ph.D., University of Massachusetts, 1963
Harvey Teres, Dean's Professor for the Public Humanities in English
Ph.D., University of Chicago, 1986
Twentieth-century American literature and culture,
Marxist theory, American studies
Jay B. Thomas, Assistant Professor
Ph.D., Virginia Tech, 2003
Petrology and geochemistry, experimental studies
of mineral and rock formation
Laurence Thomas, Professor, Philosophy and Political Science
Ph.D., University of Pittsburgh, 1976
Ethical theory, social philosophy, the Holocaust
Maria Emma Ticio Quesada, Associate Professor
Ph.D., University of Connecticut, 2003
Languages, Literatures and Linguistics; Linguistics
John W. Tillotson, Associate Professor
Ph.D. University of lowa, 1996
Science teacher education, teachers' beliefs and practices, rural education
Silvio Torres-Saillant, Professor, English
Ph.D., New York University, 1991
Caribbean, United States, Latino, and comparative literature
Nancy I. Totah, Associate Professor
Ph.D., Yale University; 1990
New methods for organic synthesis, asymmetric
synthesis of natural products
Victoria Tumanova, Assistant Professor
Ph.D. University of Iowa, 2010
Fluency, stuttering in young children
Joseph T. Tupper, Professor
Ph.D., State University of New York at Albany, 1970 Growth-factor regulation of cell proliferation
John Ucci, Professor
Ph.D., University of California, Berkely, 1964 Algebraic topology
J. Albert L. Uy, Associate Professor

Ph.D., University of Maryland-College Park, 2000
Sexual selection, animal communication, speciation
Edwin I.S. Van Bibber-Orr, Assistant Professor of Chinese
Ph.D., Yale University, 2013
Chinese Language, Premodern Chinese Poetry,
Chinese Song Lyric (Ci), Chinese Women Writers,

Reception History, Translation Theory, Print Culture in Premodern China, Ming and Qing Fiction

Matthieu H. van der Meer, Assistant Professor Ph.D., University of Groningen, 2006
The history of Platonic literature in Antiquity and the Middle Ages with a special emphasis of the reception of Platonism by the philosopher Nicholas of Cusa (1401-1464).

Robert Van Gulick, Professor
Ph.D., University of California, Berkeley, 1976
Philosophy of mind, philosophy of psychology
Peter A. Vanable, Associate Professor
Ph.D., University of Illinois at Chicago, 1997
Health psychology, HIV/AIDS prevention, substance use disorders

Kathy R. Vander Werff, Associate Professor Ph.D., University of lowa, 2002
Auditory evoked potentials, diagnostic audiology, and cochlear implants

Laura E. VanderDrift, Assistant Professor of Psychology
Ph.D., Purdue University
Inter- and intra-personal dynamics of close relationships; examining predictors of relationship outcomes, most notably dissolution behaviors and health outcomes, as well as the processes associated with these outcomes

Gregory Verchota, Professor
Ph.D., University of Minnesota, 1982
Partial differential equations, analysis
Gianfranco Vidali, Professor
Ph.D., Pennsylvania State University, 1982
Surface physics: adsorption/desorption
phenomena, two-dimensional matter, thin-film
growth; lowtemperature physics
Andrew Vogel, Professor
Ph.D., University of Kentucky, 1989
Partial differential equations
William Voltermann, Assistant Professor
Ph.D., McMaster University, 2011
Statistics
Karina von Tippelskirch, Assistant Professor
Ph.D., Marburg University (Germany), 1997
German literature
Joanne P. Waghorne, Professor
Ph.D., University of Chicago, 1976
History of religions, South Asian religion, globalization
Ernest E. Wallwork, Professor
Ph.D., Harvard University, 1971
Ethics, religion, the social sciences, and bioethics
Jianchun Wang, Research Associate Professor
Ph.D., Massachusetts Institute of T
echnology,1997
Elementary particles, experiment

## B.R. Ware, Professor

Ph.D., University of Illinois, 1972

# UNDERGRADUATE COURSE CATALOG 

Biophysical chemistry
Betsy B. Waterman, Adjunct Assistant Professor
Ph.D., Syracuse University, 1990
Mark E. Watkins, Professor Emeritus
Ph.D., Yale University, 1964
Combinatorics, algebraic graph theory
Scott Watson, Assistant Professor, Physics
Ph.D. Brown University, 2005
Particle physics; cosmology theory
James W. Watts, Professor
Ph.D., Yale University, 1990
Hebrew Bible and ancient Near Eastern religious traditions

Laura Webb, Research Professor
Ph.D., Stanford University, 1999
Structural geology, thermochronology, tectonics
Stephan Wehrli, Assistant Professor, Mathematics
Ph.D. University of Zurich, 2007
Topology
Roy Welch, Associate Professor
Ph.D., University of Wisconsin-Madison, 1997
Biochemistry, molecular signaling mechanisms
Louise Wetherbee Phelps, Emeritus Professor Ph.D., Case Western Reserve University, 1980 Composition and rhetoric (theory, phenomenological description, criticism, pedagogy), writing program administration

Corey Nathan White, Assistant Professor of Psychology
Ph.D., Ohio State University, 2010
Understanding how the brain allows us to adapt during the decision making processes and how emotions affect memory. How different information drives behavior by employing mathematical models of cognition and functional MRI to map cognitive processes onto neural systems in healthy adult populations and clinical populations with elevated emotions.

Jason R. Wiles, Associate Professor Ph.D., McGill University 2008; M.S.T ., Portland State University, 1996; M.S., Mississippi State University, 2007
Biology and science education, teaching and learning of biological evolution

Bruce H. Wilkinson, Research Professor, Earth Sciences
Ph.D, University of Texas, 1974
Sedimentary geology
Kheli R. Willetts, Assistant Professor
Ph.D., Syracuse University, 2002
African American art history and museum studies
James G. Williams, Assistant Professor
Ph.D., University of California, San Diego, 2013
African and African American musical traditions
Amanda Winkler, Associate Professor
Ph.D., University of Michigan, 2000
Seventeenth century music, music in England $\backslash$

Larry L. Wolf, Professor
Ph.D., University of California, Berkeley, 1966
Ecology and social behavior, community and
population ecology
Bradley Wyble, Assistant Professor
Ph.D., Harvard University, 2003
Temporal factors of attention, memory, and perceptual experience.

William Wylie, Assistant Professor
Ph.D., University of California, Santa Barbara, 2006
Riemannian geometry, geometric flows, global geometric analysis.

Amy S. Wyngaard, Associate Professor
Ph.D., University of Pennsylvania, 1998
French Literature
Yuesheng Xu, Emeritus
Ph.D., Old Dominion University, 1989
Applied mathematics
David Yaffe, Assistant Professor
Ph.D., City University of New York, 2003
Contemporary American studies, literature, music
Yuan Yuan, Assistant Professor
Ph.D., Rutgers University, 2010
Analytic and geometric function theory in several
complex variables and complex differential geometry.
Dan Zacharia, Professor
Ph.D., Brandeis University, 1981
Algebra
Weiwei Zheng
Ph.d., Florida State University, 2011
Inorganic chemistry, materials science, nanotechnology, assembly, green energy harvesting
Jon Zubieta, Distinguished Professor Ph.D., Columbia University, 1971 Inorganic chemistry, coordination complexes, polyoxometalates, microporous materials, technetium-based radiopharmaceuticals

# School of Education 

Dr. Joanna Masingila, Dean
230 Huntington Hall
soe.syr.edu

## About the College

Welcome to Syracuse University's School of Education, a national leader in inclusive urban education. The school offers a variety of degree programs in teaching and non-teaching areas. Many of these programs lead to initial teaching certification in New York State. Emphasizing a solid foundation in the liberal arts as well as education, each degree program accommodates the personal and professional needs of its students. Many of our faculty members hold dual appointments in the School of Education and another college within the University. The School of Education also offers numerous laboratory and field-based teaching experiences in cooperation with local school districts, community institutions, and on-and off-campus early childhood centers.

There are no careers more critical to the human condition and sustainability than teaching, educational policy and the foundations of education, research in health and exercise science, counseling and instructional technology. Our undergraduate and graduate students as well as our faculty come from throughout the U.S. and from around the world.

Our leadership in inclusive urban education is built on a legacy of pioneering work in advancing educational opportunities for all learners. By linking research to practice our community of scholars and innovators collaborate to lead nationally recognized centers and institutes and serve in leadership roles on national boards, research projects and international conferences and projects.
Join us here at Syracuse University, take part in our centers abroad in London, Florence and Beijing or in our research and training projects in Asia, Australia, Latin America and Africa. Be a part of groundbreaking projects such as Say Yes to Education and Economic Development, Schools of Promise, Smart Kids, our Summer Literacy Clinic, the Taishoff Center, and the Center on Human Policy, Law and Disability Studies as well as many other dynamic programs. Become part of the School of Education's mission to address issues and seek solutions that can define the future of teaching and leadership, higher education, health and exercise science, reading and language arts, instructional design development and evaluation, and counseling in America and around the world.

# Educational Mission 

A National Leader in Inclusive Urban Education

Syracuse University's School of Education, a national leader in improving and informing educational practice for diverse communities, is committed to the principle that diverse learning communities create the conditions that both enrich the educational experience and provide opportunities for all to succeed. The School of Education pioneered the inclusion movement in the United States, making way for all learners to participate fully in mainstream classrooms and other inclusive learning environments.

## Undergraduate Education

## Degree Requirements

All undergraduate programs offered by the School of Education typically require the completion of 120 to 138 credits. Specific program requirements vary, as do the total number of credits.

At several points during teacher preparation programs, reviews of students' progress are made to determine continued eligibility for each program. These review points vary, but in all cases include the time just prior to student teaching. See individual program descriptions for further information.
Field experiences, usually off campus, are required throughout most programs, with placement sites assigned by course instructors or through the field placement office. While convenience is considered in making placement assignments, other factors may preclude the most convenient appointments. The School of Education does what it can to facilitate transportation for field experiences before student teaching. Students are encouraged to provide their own transportation for student-teaching assignments (EDU 508).

## Single Enrollment Programs

All single-enrollment programs lead to a Bachelor of Science (B.S.) degree. Each program requires distribution in liberal arts and sciences, with a total of at least 60 credits in liberal arts.

## The School of Education's Single-Enrollment Programs are:

 Teacher Preparation Programs: Inclusive Elementary and Special Education(grades 1-6)
Health \& Physical Education (all grades)
Physical Education (all grades)
Non-Teacher Preparation Programs:
Health and Exercise Science
Selected Studies in Education

## Dual Enrollment Programs

Expertise in some areas is gained more appropriately by drawing on the course offerings of two colleges within the University. Dual programs within the School of Education require study in a content area and professional education courses (including field experiences), as well as satisfaction of college requirements. They all lead to New York State initial teacher certification.
Students must enroll in both the School of Education and the cooperating college. Dual programs are available in cooperation with the College of Arts and Sciences, the College of Visual and Performing Arts, and the David B. Falk College of Sport and Human Dynamics. Students typically complete one program offered jointly by the two colleges and, in the case of dual programs with Arts and Sciences, a major in the college reflecting the subject to be taught.

## Teacher Preparation Program

 for Birth-2 ${ }^{\text {nd }}$ Grade Offered with the David B. Falk College of Sport and Human Dynamics: Inclusive Early Childhood Special Education The School of Education is the primary (home) college for the Inclusive Early Childhood Special Education program
## Teacher Preparation Programs for Grades 7-12 Offered with the College of Arts and Sciences are:

## English Education

Mathematics Education
Science Education
Social Studies Education
Spanish Education
Teacher Preparation Programs for All Grades Offered with the College of Visual and Performing
Arts are:

## Music Education

## Art Education

These other colleges serve as the primary (home) college. However, although the primary college's policies and procedures are often followed, some policies in the School of Education must also be followed, such as meeting the prerequisites to professional semesters and student teaching, as well as specific arts and sciences course requirements.

## Undergraduate Admissions

## External Admissions

(Students applying to Syracuse University from high school or another college or university.)

The School of Education appreciates your interest and hopes you will continue to learn more about the School by exploring the website (http://www. soe.syr.edu), visiting campus and meeting with a representative or faculty member.

## To Apply

Candidates for undergraduate admission to Syracuse University apply to a specific major within one of our schools or colleges. To learn more about the programs available in the School of Education, contact Zachary Schuster, Undergraduate Admissions Recruiter at (315) 443-4269 or zmschust@syr.edu.

For information about the application, the application process or enrollment dates and deadlines, contact the Office of Admissions at (315) 443-3611 or orange@syr.edu. To apply, please visit: http://www.admissions.syr.edu/

## Application Timelines

Early Decision Deadline: November 15
Regular Decision Deadline: January 1
Admissions Notification: Mid-March
Candidates must reply by May 1

## Visit Us

If you are interested in a full campus tour, a personal interview or an Office of Admission's information session, please contact the Office of Admissions at (315) 443-3611 or orange@syr.edu.

If you would like to meet with Zachary Schuster, the Undergraduate Admissions Recruiter for the School of Education, please contact her at (315) 443-4269 or zmschust@syr.edu

## Internal Admissions

(Students who are already attending Syracuse University and want to transfer to the School of Education.)

## Intra-University Transfer

Syracuse University students interested in an intra-university transfer (IUT) to the School of Education must meet the following cumulative grade point average (GPA) requirements for their desired program of study:

### 3.0 Art Education

3.0 Health and Exercise Science
3.0 Inclusive Early Childhood Special Education
3.0 Inclusive Elementary and Special Education
3.0 Music Education
3.0 Health \& Physical Education
3.0 Physical Education
3.0 Secondary Education Programs (dual with Arts and Sciences)
2.8 Selected Studies in Education
*Students who fall below the minimum GPA requirement are encouraged to apply as an IUT into the School of Education. Applications will be reviewed and considered on an individual basis.

Students must submit an intra-university transfer (IUT) application, available in the Office of Academic and Student Services in the School of Education, 111 Waverly Avenue, Suite 230; in addition, a personal interview may be required from the Office of Academic and Student Services. Students who meet the cumulative GPA requirement are admitted on a space-available basis as determined by the education program. Those students whose cumulative GPA does not meet the requirements can be counseled as to the best options for them.

The applicability of prior earned credit (both at SU and transfer credit) will be evaluated. Intrauniversity transfer (IUT) applications are held until the end of the semester when GPAs and the student's interest in entering the program are assessed.
Students considering transfer into one of the single programs in education may find the following course suggestions helpful. These courses may be taken by non-education students with advisement while they make the decision to transfer or while the intra-university transfer (IUT) application is being processed.
Inclusive Early Childhood Special Education
CFS 202 - Development of Children and Youth
EDU 203 - Introduction to Inclusive Schooling
DSP 203 - Introduction to Inclusive Schooling
Inclusive Elementary and Special Education
Teacher Preparation Program
EDU 203 - Introduction to Inclusive Schooling
(first year)
SPE 311 - Perspectives on Disabilities EDU 303 - Understanding Learning and Teaching (spring)

Health and Exercise Science
PPE 295 - Introduction to Exercise Science
HEA 332 - Personal Health and Safety
Physical Education or Health \& Physical Education
PPE 177 - Introduction to Health and Physical Education

EDU 204 - Principles of Learning in Inclusive Classrooms
Selected Studies in Education
EDU 221 - Education for Transformation
EDU 321 - International Education for Transformation

EDU 310 - The American School

## Undergraduate Financial Aid

The Office of Financial Aid and Scholarships is available to address your questions, offer options for payment, assist in filing student loan and grant applications, and suggest financial planning options. For additional information, visit their web site at http://financialaid.syr.edu, call (315) 4431513 or send e-mail to finmail@syr.edu.

## School of Education Scholarships

## Burton Blatt Scholarship

This scholarship is open to both undergraduate and graduate students at the School of Education. Recipients are chosen both for merit and financial need with preference given to a minority candidate.

For information regarding this scholarship contact:
Angela Flanagan, Scholarship Coordinator
Awards \& Scholarship Committee
250 Huntington Hall
Syracuse, New York 13244-2340
Phone: (315) 443-4754
Fax: (315) 443-2258
e-mail: arflanag@syr.edu

## TEACH Grant

The College Cost Reduction and Access Act of 2007 created the Teacher Education Assistance for College and Higher Education (TEACH) Grant Program that provides grants of up to $\$ 4,000$ per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families. More
information can be found at http://financialaid. syr.edu/teach.htm.

## Robert Noyce Scholars Program

The Robert Noyce Scholars program, funded by the National Science Foundation and offered jointly through Syracuse University's College of Arts and Sciences and School of Education, responds to the critical need for mathematics and science teachers by encouraging talented science, technology, engineering, and mathematics (STEM) students and STEM professionals to pursue teaching careers in high-needs K-12 schools.

The funds granted from the Syracuse University Noyce Scholars Program are intended to assist persons who wish to make a commitment to teach science or mathematics in high-needs urban or rural schools. Qualifying undergraduate students receive up to $\$ 10,000$ per year for a maximum of three years. Qualifying graduate students receive up to $\$ 20,000$ for one year of study. Promising freshman and sophomore STEM majors can receive $\$ 1,200$ for a four-week summer internship.

For information please contact:
John W. Tillotson Ph.D., Associate Professor Syracuse University Noyce Scholars Program 101 Heroy Geology Lab
Syracuse, NY 13244-1070
315-443-2586
noyce@syr.edu

## Accreditation

The Syracuse University Unit for Preparing School Professionals (Unit) is accredited by the National Council for Accreditation of Teacher Education (NCATE). The Unit spans five colleges (College of Arts \& Sciences, College of Visual and Performing Arts, School of Education, David B. Falk College of Sport and Human Dynamics, and the School of Information Studies) and includes twenty four (24) program areas. The Unit will host its next accreditation visitor in spring 2018.
On July 1, 2013, NCATE consolidated with the Teacher Education Accreditation Council (TEAC) to form the Council for the Accreditation of Educator Preparation (CAEP). CAEP is the new accrediting body for educator preparation. CAEP continues to require institutions of higher education who prepare school professionals (Education Preparation Providers (EPPs)) to use performance based assessments to measure a candidate's proficiencies, a programs' success in achieving its goals, and the EPPs' operations in support of candidates and programs.
Professional accreditation of preparatory education programs is the bedrock upon which all professions (e.g., architecture, engineering, medicine, and law) have built their reputations.

It assures that those entering the respective field have been suitably prepared to practice through assimilation of a body of knowledge and pre-service practice in the profession. Accreditation of schools of education indicates that the school underwent rigorous external review by professionals, that performance of a teacher candidate in the program has been thoroughly assessed before he or she is recommended for licensure, and that programs meet standards set by the teaching profession at large.

Regional accreditation organizations are now following this same rigorous approach to assessments and are asking faculty from education to be leaders at their institutions. This paradigm shift is creating a culture on college campuses towards innovation and quality improvements.

Please refer to the CAEP website for additional information on accreditation: http://caepnet.org/

## Student Services

## The Office of Academic and Student Services

The Office of Academic and Student Services was created to ensure that students get the most out of their college experience. The staff in the office provides a thorough and effective system of support for both undergraduate and graduate students from the admissions process through graduation and beyond.

From academic support to career advice to information about opportunities to study abroad, the professionals in Academic and Student Services have the experience and knowledge to answer questions, provide advisement, and make referrals as necessary.

## Publications

Academic and Student Services publishes a newsletter each semester which provides students, faculty, and staff current information about certification, career services, and advising. The current and previous newsletters can be found online at: http://soe.syr.edu/current/student_ services/default.aspx

## Forms

Official forms most commonly requested by students can be found in the Office of Academic and Student Services, and also on the website at: http://soe.syr.edu/current/student_services/ forms.aspx. If a form that is relevant to a specific academic situation cannot be found on the website, students can stop by the Office of Academic and Student Services for assistance. Academic and Student Services

111 Waverly Avenue, Suite 230
Syracuse, NY 13244
Phone (315) 443-9319
Fax (315) 443-5732

## Undergraduate Advising

All undergraduate students in the School of Education are encouraged to make use of the facilities of the Office of Academic and Student Services. Located at 111 Waverly Avenue, Suite 230, Academic and Student Services has the resources to help students better understand academic requirements, negotiate academic policies and processes, and get the most out of their college experience.
The mission of Academic and Student Services is to help students succeed by providing information, fostering personal development and responsibility, and offering supportive services. Students have an open invitation to stop by with questions or concerns regarding academic programs, advising, career issues, and certification. If an answer is not provided here, our staff is dedicated to helping students find what they need.

Services available to undergraduates through the Office of Academic and Student Services include the following:

Advising (faculty and staff)
Peer Advising
Admissions
Academic and Personal Support
Career Services
Teacher Certification

## Graduate Advising

The Office of Academic and Student Services provides advice and guidance on School of Education and Syracuse University policies, advocates for student concerns, and offers a range of services to assist students as they work toward their academic and career goals.

The mission of Academic and Student Services is to help students succeed by providing information, fostering personal development and responsibility, and offering supportive services. Students have an open invitation to stop by with questions or concerns regarding academic programs, advising, career issues, and certification. If an answer is not provided here, our staff is dedicated to helping students find what they need.
Services available to graduate students through the Office of Academic and Student Services include the following:
Advising (faculty and staff)
Admissions
Academic and Personal Support

## New York State Teacher Certification

**Required for all New York State Teacher Certifications and for all initial certification (teacher preparation) programs:

EDU 366 (formerly EDU 400) Safe and Healthy Learning Environments (0 credits for graduate students, 1 credit for undergraduates), or equivalent, which includes the following topics: Identifying/reporting child abuse, violence prevention, child abduction prevention, highway/ general safety, alcohol/drug/tobacco prevention, fire and arson prevention, and training related to the Dignity for All Students (DASA) Act. Students who have already met requirements for a New York State certificate may already have this completed. Those who earned their other certificate in another area before the DASA requirement was instituted will have to complete DASA training.

## Initial Certification

Is the first New York State certificate and is effective for 5 years from the issuance date.

Complete School of Education approved undergraduate or graduate teacher prep program.

Pass New York State teacher exams.
Complete fingerprinting process at least 2 months prior to graduation.

Candidates should apply for this certification within 2 years of graduation to be eligible for School of Education's recommendation.

## Professional Certification

Must be earned before initial certificate expires.
New York State teacher exams are not required (with the exception of Speech \& Language Disabilities).

Requires completion of a Master's degree in a related area of initial certification.

Requires completion of 3 years full time teaching employment.
Requires completion of professional development through school district employer.

## Options for those with Initial Certification Earned at the Bachelors Level

Earn a Master's degree leading to professional certification in area of initial certification.

Earn a Master's degree in a new certification area.
Earn a Master's degree, provided that 12 graduate credits of content related to the initial certificate are completed (as part of the Masters or in addition to it), as specified by New York State (must apply for certification directly to New York State Department of Education).

## Checklist of Steps to File for New York State Certification

Successfully pass the required New York State Teacher Certification exams. Test dates, registration and preparation guides are available at www.nystce.nesinc.com.

Apply for fingerprinting clearance at least 2 months prior to graduation.

Meet with an advisor in the Office of Academic and Student Services, 111 Waverly Avenue, Suite 230, to confirm that all degree requirements will be completed. Call 315-4439319.

Apply for certification through NYSED TEACH Online Services at www.highered.nysed.gov/ tcert/. Directions will be made available prior to graduation.

## Recommendation for Certification

Online certification recommendation will be completed once award date is posted on transcript (typically 4-6 weeks after graduation).

## Out-of-State Teacher <br> Certification

Each state has specific teacher certification requirements; therefore, it is recommended that students search each state's education department web site for the most up-to-date information.

## Fingerprinting

Required for New York State certification.
Apply for fingerprinting clearance at least 2 months prior to graduation.
Information and Updates Regarding all New York State Teacher Certification Examinations can be found at: http://www.nystce.nesinc.com/ NY_annProgramUpdate.asp

## Career Services Office

The School of Education Career Services center offers a variety of services to help students with their job search in the education field.

These services include opening a credential file, resume assistance, Teacher Recruitment Days participation and New York State Teacher Certification recommendation.

## Credential Files

Recommended to be opened in the senior year after student teaching placement.

Contains recommendation letters from host teachers, professors, and employers.
\$35 registration fee is required to open a file (first 3 mailings are free of charge). Once a file contains at least 3 letters, it is ready to send to prospective employers.

Copies of the file are sent at request of applicant via email to the Career Services Coordinator.

All checks and money orders should be made payable to Syracuse University.

Application forms are available on the School of Education website.

## Resume and Cover Letter Assistance

Resource materials available at 111 Waverly Avenue, Suite 230.

Resume and cover letter review and assistance. Please email request for an appointment to the Career Services Coordinator.

## Teacher Recruitment Days

The annual Central New York Teacher Recruitment Days job fair is held each spring at SUNY Cortland, New York.

Eligible Syracuse University School of Education students will be offered the opportunity to interview with recruiters visiting from a variety of schools.

## Job Search Handbook for Educators

This handbook is available free of charge to facilitate the job search. It offers valuable tips for resumes, cover letters and interviewing techniques. It also contains information related to job hunt strategies and teacher ‘supply and demand' per region.
Teaching Opportunities both Domestic and Abroad:

Explore career websites.

## Study Abroad

At Syracuse University, studying abroad is a longstanding tradition. More than half the students enrolled through the SU Abroad (formerly
known as DIPA) come from universities across the U.S. and from almost all major fields of study.

The School's programs run in conjunction with SU Abroad and have close ties to local universities, allowing students to design integrated programs of study appropriate to their academic and linguistic abilities. Every SU Abroad Center is overseen by a faculty director, administrators and host-country staff who are available to assist students at all times with their academic and personal needs. Pre-departure and on-site orientation programs further prepare students for their semester or year abroad.

The School of Education supports and encourages study abroad for undergraduate students enrolled in any of our programs. The faculty and program advisors work very closely with students on appropriate course sequencing to facilitate this.

## Facilities

The quality of a student-centered research institution is measured in part by its success in integrating its students' learning experiences and its faculty members' scholarship. In a professional school, the key to that integration lies in sustained, critical, always-respectful engagement with the profession and those it serves. It relies upon creating a community of learners devoted to service. The efforts of our students and faculty members to create such a community are supported by an organizational infrastructure of coordinating councils, teacher centers, professional development schools, subject matter academies, specially-funded research and development projects, and skilled staff members. All are devoted to nurturing collaborative partnerships between preservice educators, University faculty, and practicing professionals in public education, higher education, and other educational and work environments.

The following facilities are part of our campus in Syracuse, New York:
Huntington Hall houses the Dean's office and the majority of School of Education departments and offices.
The Hoople building houses the faculty offices, clinic and classroom for the Department of Counseling and Human Services. The Center for Human Policy is also located in Hoople.
Heroy is home to the Department of Science Teaching and houses classroom and laboratory space.
Comstock Art Facility, 1055 Comstock Ave is the main building for Art Education.

Crouse College houses an auditorium and practice space for Music Education.

Carnegie is home to Math Education.
111 Waverly Avenue, Suite 230 is home to the

Office of Academic and Student Services.
The Women's Building houses the Exercise Science Department's faculty and administrative offices, two research laboratories, two gymnasiums, an indoor pool, a dance studio, outdoor playing fields, and tennis courts.
Exercise Science research facilities include:
Human Performance Laboratory
Hypoxia Laboratory
Muscle Biology Laboratory
Ernie Davis is home to a teaching laboratory and classroom in addition to the Health and Exercise Science Learning Community.

## Research Centers \& Institutes

The Syracuse University mission of Scholarship in Action is strengthened by the centers and institutes housed at the School of Education.

The School of Education's centers and research institutes are growing to accommodate the needs of the communities they serve and to offer students robust interdisciplinary experiences.

## The Inclusion Institutes

Institute on Communication and Inclusion
Taishoff Center on Inclusive Higher Education
Schools of Promise

## School Reform for Urban Youth

Landscape of Urban Education Lecture Series
Early College High School
Say Yes to Education

## Collaborative Partnerships

Liberty Partnerships Program
Kenyatta University and Syracuse University Partnership

Center for Human Policy, Law and Disability Studies

Community Initiatives in the Visual Arts
Pyscho-Educational Teaching Laboratory
The Study Council at Syracuse University

## Higher Education Supports and Initiatives

## Academic Opportunity Programs

Collegiate Science and Technology Entry Program (CSTEP)

Science and Technology Entry Program (STEP)
Louis Stokes Alliance for Minority Participation (LSAMP)
Arthur 0. Eve Higher Education Opportunity Program (HEOP)
Student Support Services (SSS)
Intergroup dialogue
Regional Holocaust and Genocide Initiative
McNair Scholars Program
Extended Campus
Office of Professional Research and Development

## Major

Art Education, BFA
Art Education Program
Information

## Contact:

James Rolling Jr, Department of Art
ComArt Building, 315-443-3700, jrolling@syr.edu
School of Education contacts:
Academic Advisors, 111 Waverly Avenue, Suite
230, 315-443-9319.
College of Visual \& Performing Arts contact: Michele Buza, 200 Crouse College, 315-4432517

## Faculty

Shariff Bey, James Rolling Jr
The Bachelor of Fine Arts (B.F.A.) degree program in art education emphasizes the studio arts as an exploration of the ideas, materials, and aesthetics through which we shape meanings, negotiate identity and organize society. Students will obtain an expertise in the development of arts-based and design-oriented curricula linked to national and New York State learning standards for the visual arts and promoting multi-literacies, inclusivity, critical inquiry and social responsibility.
In this program, students dually enroll in the College of Visual and Performing Arts and the School of Education. Studio arts courses and interdisciplinary electives are encouraged in combination with educational theory and cultural foundations as students prepare to be professional teachers of art. At a minimum, the B.F.A. degree in art education can be earned with the satisfactory completion of 130 credits.
In the junior year of the program, students have the opportunity to teach art lessons to children
ages 5 to 15 in weekly workshops that prepare them for student teaching in local schools in their senior year. The Syracuse University Student Art Education Association, a chapter of the National Art Education Association, is open to both undergraduate and graduate students in art education. This organization is dedicated to offering pre-service art teachers, as well as any interested art and pre-service education students, opportunities to enrich their pedagogical practice by facilitating social and networking opportunities for professional development, hosting guest speakers, and promoting and practicing outreach and community service through the arts.

After going through the application process and passing the requisite New York State exams (or state-specific certification exam requirements and other requirements, if you plan to teach in another state), you will be eligible for initial certification as an art teacher in all grades. Career services are available through the School of Education.

## Major Requirements: 61 credits

ART 101 - First Year Colloquium
FND Studio (x4) 3 credits each
FND 114 - Special Topics in Foundation Drawing
AED 211 - The Creative Classroom: Reexamining School Art Misconceptions Through Studio Inquiry

AED 317 - Philosophy \& Foundations of Art Education Practice

AED 510 - Special Problems in Art Ed
EDU 204 - Principles of Learning in Inclusive Classrooms

EDU 301 - Methods and Practice in Teaching Art
EDU 302 - Methods and Curriculum in Teaching Art

EDU 304 - Study of Teaching
EDU 508 - Student Teaching
RED 326 - Literacy Across the Curriculum
SED 340 - Participation in the Professional Development School

## Art History Requirements: 12 credits

HOA 105 - Arts and Ideas I
HOA 106 - Arts and Ideas II
ART 340 - Visiting Artist Lecture Series (x3) 1 credit each
Art History/Theory Elective 3 credits
Academic Requirements: 6 credits
WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing

## Academic Electives: 15 credits

## Mathematics (3 credits)

MAT 117 - Foundational Mathematics via Problem Solving I or higher

## Natural Science (3 credits

## Humanities (3 credits)

Social Sciences (3 credits)
Foreign Language (3 credits)

## Studio Electives: 36 credits

## Note:

Consult with the School of Education, 111 Waverly Avenue, suite 230, regarding other New York State requirements for graduation and certification.

## English Education (Dual), BA

## Arts and Sciences/Education

 (Dual)
## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly
greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education:
English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information
is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

The Professional Core Requires:
EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse

Student Needs
EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising
hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## English Education

## Contact:

Dr. Kelly Chandler-Olcott, Program Coordinator, 200 Huntington Hall, 315-443-4755

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/ or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. English education majors must complete:

One mathematics (MAT) course from Liberal Arts
Core Quantitative Skills List (3 credits) or
MAT 117 - Foundational Mathematics via Problem Solving I or

MAT 118 - Foundational Mathematics via Problem Solving II
if not completing the Quantitative Skills requirement for the Liberal Arts Core. (3 credits)
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts related course within Arts and Sciences (HOA or HOM, or other approved humanities course focusing on one or more of the arts) (3 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study

## English Content

English Education students must complete the English and Textual Studies major as defined by the English Department. Twenty-four credits of the 30 required must be upper-division ( 300 level and above).
English Education students must include the following courses (not required of other ETS majors) within their majors:
ETS 325 - History and Varieties of English

One course concentrating on Shakespeare (3 credits)

One course with a multicultural (non-Western/ American minority) emphasis (3 credits)

One upper division WRT course, chosen from

WRT 301 - Advanced Writing Studio: Civic Writing
WRT 303 - Advanced Writing Studio: Research and Writing

WRT 307 - Advanced Writing Studio: Professional Writing

WRT 428 - Studies in Composition, Rhetoric and Literacy

One Speech Communication Course
In addition, students must complete one speech communication course (3 credits) from the following:

CRS 225 - Public Advocacy
CRS 325 - Presentational Speaking
Health and Exercise Science, BS

## Contact:

Tom Brutsaert, Chair, 201 Women's Building, 820 Comstock Avenue, 315-443-2114 or tdbrutsa@ syr.edu; OR Melissa Tobin, Undergraduate Advisor, 315-443-9800 or mmtobin@syr.edu.

The B.S. degree in health and exercise science is a non-teaching certification program offering study in the physiological, mechanical and psychological aspects of physical activity and health behavior. There are three tracks from which to choose in health and exercise science.

The general health and exercise science track prepares students for careers in community health and fitness, corporate fitness, clinical physiology, research, medicine, sports medicine and others. The pre-physical therapy track allows students the opportunity to interchange some courses in order to meet the requirements of graduate study in physical therapy (DPT) while still leaving options open to the other possible career paths listed above. The third track, the 3+3 program with SUNY Upstate Medical University (UMU), allows students the opportunity to spend three years in our health and exercise science program focusing on physical therapy preparation and then continue with three years in the Doctorate of Physical Therapy (DPT) program at SUNY UMU. Students transfer the first year of credits taken from SUNY UMU to SU which then completes their fourth year at SU and grants them a B.S. degree in health and exercise science.

General Health and Exercise
Science Program Requirements
Liberal Arts Requirements
WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
WRT 307 - Advanced Writing Studio: Professional Writing or
WRT 407 - Advanced Workshop in Professional, Technical, or Disciplinary Writing

CRS 225 - Public Advocacy or
CRS 325 - Presentational Speaking or
CRS 435 - Interviewing
MAT 221 - Elementary Probability and Statistics I
MAT 194 - Precalculus and
MAT 285 - Life Sciences Calculus I
or
MAT 285 - Life Sciences Calculus I and
MAT 286 - Life Sciences Calculus II

## Natural Sciences

BIO 121 - General Biology I
BIO 123 - General Biology II
BIO 124 - General Biology II Laboratory
BIO 216 - Anatomy \& Physiology I
BIO 217 - Anatomy and Physiology II
CHE 106 - General Chemistry Lecture I
CHE 116 - General Chemistry Lecture II
CHE 107 - General Chemistry Laboratory I
CHE 117 - General Chemistry Laboratory II
NSD 225 - Nutrition in Health

## Social Sciences

PSY 205 - Foundations of Human Behavior
PSY 223 - Introduction to Cognitive Neuroscience or

PSY 315 - Drugs and Human Behavior or
PSY 324 - Developmental Biopsychology

## Professional Requirements

HEA 332 - Personal Health and Safety
HEA 335 - First Aid
HEA 336 - Cardiopulmonary Rescue
HEA 485 - Worksite Health Promotion
PPE 295 - Introduction to Exercise Science
PPE 408 - Analysis of Human Motion

PPE 435 - Introduction to Sports Psychology
PPE 483 - Scientific Principles of Conditioning
PPE 385 - Motor Behavior Across the Lifespan
PPE 486 - Prevention and Care of Athletic Injuries
PPE 497 - Physiology of Exercise
PPE 470 - Experience Credit
Two PPE electives any level ( 6 credits)
Three PPE electives numbered 500 or higher (9 credits)

## Electives

Two approved humanities or social science electives ( 6 credits)
Two approved Arts and Sciences electives (6 credits)

Three open electives (9 credits)

## Total Credits 125

## Note:

Students interested in pursuing an advanced degree in Physical Therapy (and not interested in following the $3+3$ program described below) will take 8 credits of physics (includes labs) and 3 credits of child psychology, as required for entrance into physical therapy graduate level programs. These alternate classes will fill elective slots in the exercise science undergraduate track.

## The 3+3 DPT Program with SUNY Upstate Medical University

Health and Exercise Science Requirements for the 3+3 DPT Program with SUNY Upstate Medical University

## The General Health and Exercise Track

The Changes in Curriculum from the General Health and Exercise Track is as Follows:
Two PPE electives ( 6 credits)
No open electives
One Arts \& Science elective (3 credits)
Child Psychology (3 credits)
Two Math: Calculus \& Statistics (6 credits)
PHY 101 - Major Concepts of Physics I
PHY 102 - Major Concepts of Physics II
Senior Year SUNY Upstate Medical University
PHYT 601 - Gross Anatomy ( 6 credits)

PHYT 621 - Foundations Patient/Client
Management (3 credits)
PHYT 611 - Bioscience I (5 credits)
PHYT 612 - Bioscience II (2 credits)
PHYT 625 - Movement Analysis I (4 credits)
PHYT 605 - Neuroscience ( 6 credits)
PHYT 616 - Interventions II (2 credits)
SU credits 99
SUNY UMU credits 28

## Total Credits 127

## Health and Physical Education, BS

## Contact:

315-443-2115, 820 Comstock Ave/ 201 Women's Bldg

Syracuse University's Bachelor of Science (B.S.) degree in Health and Physical Education meets the academic requirements for New York State initial certification, in both Health AND Physical Education, therefore providing graduates with two New York State teaching certifications (all grades in Health Education and all grades in Physical Education) as well as teacher certification in states with reciprocal agreements. The New York Physical Education certification also qualifies teacher candidates to coach any sport in any school (7-12) in the state of New York.

The degree program emphasizes teaching methods that encourage all children to embrace a physically active and healthy lifestyle with a focus on urban and inclusive settings. The unique location of Syracuse University and the diversity of the surrounding community provide numerous authentic field experiences in urban and suburban settings alike starting in the first year. The School of Education affords its teacher candidates the advantages of resources found only at a major research university. Our undergraduate studies are enhanced with a strong liberal arts core. Our small class sizes allow teacher candidates to develop strong, personal relationships with their professors, advisors, and peers.
Teacher candidates spend a minimum of 25 hours in the public schools each academic year culminating with full time student teaching experiences in both health education and physical education in private and public school settings, meeting the time requirements for both as mandated by the NYSED.

The Dual Certification in Health and Physical Education will require a minimum of 136 credits
hours and requires teacher candidates to attain a 2.8 GPA by senior year student teaching. Student teaching requirements include successful completion of the Child Health and Life Safety Seminar and CPR/AED and First Aid certification.

## Program Requirements

## Liberal Arts Requirements

MAT 121 - Probability and Statistics for the Liberal Arts I or

MAT 221 - Elementary Probability and Statistics I
WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
PSY 205 - Foundations of Human Behavior
CRS 225 - Public Advocacy or
CRS 325 - Presentational Speaking
Humanities elective (any) (3 credits)
Humanities elective (PHI, REL or LIT only) (3 credits)

History (3 credits)
Arts \& Sciences elective (any) (6 credits)

## Arts and Science elective

3 credits of health-related courses such as
QSX 111 - Queer Histories, Communities, and Politics
QSX 112 - Sexualities, Genders, Bodies
MES 382 - Health in the Middle East
ANT 382 - Health in the Middle East
HTW 382 - Health in the Middle East
ANT 357 - Health, Healing, and Culture
ANT 365 - Sexual Attraction in Cross-cultural Perspective
ANT 455 - Culture and AIDS
PSY 329 - Biopsychological Perspectives on Women's Health

WGS 329 - Biopsychological Perspectives on Women's Health

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study. If Language requirement has been met, a 3-credit liberal arts elective must be taken in its place.

## Natural Sciences

BIO 121 - General Biology I

NSD 225 - Nutrition in Health

## Professional Physical Education

PPE 177 - Introduction to Health and Physical Education

PPE 235 - Teaching K-12 Health-Related Fitness
PPE 295 - Introduction to Exercise Science
PPE 381 - Physical Education in the Elementary Schools

PPE 383 - Physical Education in the Secondary

## School

PPE 385 - Motor Behavior Across the Lifespan
PPE 394 - Assessment and Curriculum in Health and Physical Education
PPE 395 - Structural Kinesiology
PPE 408 - Analysis of Human Motion
PPE 415 - Physical Education Teacher Development

PPE 481 - Adapted Physical Education

## Professional Health Education

CFS 388 - Human Sexuality
HEA 332 - Personal Health and Safety
HEA 445 - Methods of Teaching Health
HTW 303 - Community and Environmental Health
HTW 318 - Alcohol, Other Drugs, Sex and
Gambling: Dynamics of Addiction or
PSY 315 - Drugs and Human Behavior

## Professional Education

EDU 204 - Principles of Learning in Inclusive Classrooms

EDU 304 - Study of Teaching
EDU 508 - Student Teaching
RED 326 - Literacy Across the Curriculum
SPE 311 - Perspectives on Disabilities
CFE 444 - Schooling \& Diversity or
WSP 444 - Schooling \& Diversity or
EDU 310 - The American School

## Technology

(choose 3 credits)
IDE 201 - Integrating Technology into Instruction I
IDE 301 - Integrating Technology into Instruction II
IDE 401 - Integrating Technology into Instruction III

## Activity Courses

(10 credits total)

Required Activity Courses
PED 240 - Individual/Dual Sports
PED 250 - Team Sports
PED 262 - Gymnastics
PED 209 - Adventure Activities I
3 Credits of PED activity electives (choose three is consultation with your advisor)

## Aquatics

(choose 2 credits)
PED 211 - Beginning Swimming
PED 212 - Intermediate Swimming
PED 213 - Advanced Swimming
PED 216 - Water Safety Instruction *
PED 217 - Lifeguarding
Note:
*recommend WSI certification prior to student teaching

## Dance/Aesthetics

## (choose one)

DTS 231 - Introduction to Dance
DTS 228 - Basic Social Ballroom Dance
DTS 233 - African Dance

## Open Elective:

Any courses (3 credits)

Required Child Health and Life<br>Safety Seminar<br>Covering the following topics:<br>Identifying/reporting child abuse<br>Violence prevention<br>Child abduction prevention<br>Highway/general safety<br>Alcohol/drug/tobacco prevention<br>Fire and arson prevention

## Note:

*CPR/AED/FA certification must be valid during student teaching
*WSI certification recommended prior to student teaching

Inclusive Early Childhood Special Education, BS

Inclusive Early Childhood Special Education

## Contact:

Mara Sapon-Shevin, 176 Huntington Hall, 315-443-2685, saponsh@syr.edu
This B.S. degree program is a dual program between the School of Education and the David B. Falk College of Sport and Human Dynamics with the School of Education as the home school. This program provides you with the professional background and a solid core of liberal arts distribution and concentration coursework. A cornerstone of the program is the extensive and varied series of field experiences it offers, coordinating coursework with fieldwork in the schools as early as the first year of study. Many schools and childcare centers in the Syracuse area are at the forefront of inclusive education. Through our close partnerships with local schools and early childhood centers that welcome all students, and with our wide network of urban, suburban, and rural school affiliations, we provide a broad range of opportunities for getting the most out of field experiences.

## Program Requirements

Program requirements include liberal arts skills, a concentration in social/behavioral science with emphasis on child and family studies, and professional coursework. This intense program typically requires a minimum of 135 credits. The length varies and can be more than 138 credits, depending on the student's mathematics and foreign language background, and other choices made by the student. In most cases, students enroll for more than 15 credits in a semester and/or take summer courses (at SU or other colleges) to complete the degree within four years. Therefore, prospective students not already enrolled in the School of Education are encouraged to consult with the School of Education as early as possible.
Note: Because of the professional education sequence, the study abroad semester for students completing in four years must be spring of the junior year.

## Liberal Arts Requirements:

WRT 105 - Studio 1: Practices of Academic Writing or
WRT 109 - Studio 1: Practices of Academic Writing (Honors)
WRT 205 - Studio 2: Critical Research and Writing or
WRT 209 - Studio 2: Critical Research and Writing (Honors)
Algebra competency or
MAT 112 - Algebraic Operations and Functions
MAT 117 - Foundational Mathematics via Problem

Solving I
MAT 118 - Foundational Mathematics via Problem Solving II
SCI 104 - Science-Questions and Quests: Physical Phenomenal
SCI 105 - Science-Questions and Quests: Physical Phenomena II
U.S. History (3 credits)

History II (diversity within the U.S. or Global History) (3 credits)

Geography (3 credits)
Citizenship, Economics, and Government (3 credits)
Global Perspectives (3 credits)
Literature ( 6 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or passing level three of high school study

Other liberal arts breadth (3 credits)
Choose one course from the program's list of approved fine arts, philosophy, religion, mathematics or scientific perspectives courses.

## Child and Family Studies/Social Science Concentration:

CFS 201 - Family Development
CFS 202 - Development of Children and Youth
CFS 331 - Play, Childhood Development and Early Education
CFS 345 - The Developing Infant
CFS 395 - Seminar: Family and Child Intervention
CFS 367 - Child and Family in Cross-Cultural Perspectives or
CFS 371 - Latino Families and Children in the United States
CFS 447 - Principles and Practices in Parenting or
CFS 479 - Power, Conflict, Violence, and the Family or
CFS 487 - Critical Incidents in Family Development

## Social sciences:

Three social science courses used to meet distribution requirements above. At least one must be 300 level ( 9 credits)

Professional Education Requirements:
EDU 203 - Introduction to Inclusive Schooling

EDU 201 - Practicum in Pre-K Inclusive Education
SPE 311 - Perspectives on Disabilities
IDE 201 - Integrating Technology into Instruction I
CFS 432 - Foundations and Principles of Early Childhood Education

CFS 335 - Issues and Perspectives in Early Childhood Education

CSD 303 - Communication in the Classroom
EDU 366 - Safe and Healthy Learning Environments or equivalent, which includes the following topics: Identifying/reporting child abuse, violence prevention, child abduction prevention, highway/general safety, alcohol/ drug/tobacco prevention, fire and arson prevention, and training related to the Dignity for All Students (DASA) Act.

## Arts in Education (Complete two

 courses from the following list (2 credits total)EDU 431 - Art in the Classroom
EDU 432 - Music in the Classroom
EDU 433 - Speech and Drama in the Classroom

## Assessment

Both this program and the teaching profession are demanding, requiring not only appropriate attitudes about children, and skills in working with them, but also knowledge of the content to be taught, excellent writing skills, critical thinking skills, and much more. Students' progress is reviewed several times through the program against specific proficiencies and other assessment criteria. Effective for those entering the program Fall 2014 or later, to be eligible for Block I, students must have a 3.0 cumulative GPA a 3.0 average for and no grade below a $B$ - in EDU 203, EDU 201, SPE 311, and CFS 432 (if taken before Block I); a B- or better grade in each writing course taken; and a B- or better average with no grade below a C in both the two required mathematics courses and the two required natural science courses, with at least one B- grade in each before entering Block I. In addition, they must have satisfactory ratings on the proficiencies and dispositions that are part of the professional courses and field experiences. Reviews also take place to determine eligibility to enter subsequent professional blocks, and additional information about this is available from the program faculty teaching in the blocks.

## Block I

EED 314 - Teaching Strategies for Inclusive Education

EED 325 - Primary Grade Literacy Methods and Curriculum

EED 361 - Block I Field Experience and Seminar

## Block II

EED 323 - Primary Grade Mathematics Methods and Curriculum

EED 328 - Block II Field Experience
EED 362 - Block II Field Seminar
SPE 324 - Differentiation for Inclusive Education
EDU 434 - Creative Movement for the Classroom
IDE 301 - Integrating Technology into Instruction II

## Early Childhood Block III

EED 400 - Selected Topics Early Childhood Integrated Methods I (3 credits)
EED 400 - Selected Topics Early Childhood Integrated Methods II (3 credits)

EED 400 - Selected Topics Early Childhood Block III Field Experience (3 credits)
IDE 401 - Integrating Technology into Instruction III

## Student Teaching

All students must complete EDU 366 - Safe and Healthy Learning Environments before the student teaching semester.
EED 464 - Student Teaching Seminar/Inclusive Education

EDU 508 - Student Teaching Inclusive Early Childhood Special Education (12 credits)

SPE 434 - Collaborative Teaching for Inclusive Education

## Inclusive Elementary and Special Education, BS

## Contact:

Julie Causton, Program Coordinator, 315-4432685 or jcauston@syr.edu.

This innovative program is designed to prepare graduates for careers in classrooms (grades
1-6) that serve an increasingly diverse student population. In addition to liberal arts distribution courses and depth in a liberal arts area, students take professional courses that integrate within them material on children with both typical and "special" needs who come from diverse cultural backgrounds. Supervised field experiences take place throughout the program at a variety of Syracuse area settings, and include placements in schools that are at the forefront of inclusive education.

## Program Requirements

Program requirements include liberal arts skills
and distribution courses, a concentration or major of no less than 30 credits in an approved liberal arts and sciences area, and professional coursework. The demands of the program means that greater amount of credits hours than many programs and heavier semester loads are typical. Total credits are usually between 133 and 145, although the length varies and can be more than 145 credits, depending on the student's skill background, the chosen liberal arts concentration or major, and other choices made by the student. In most cases, students enroll for more than 15 credits in a semester and/or take summer courses (at SU or other colleges) to complete the degree within four years. Therefore, prospective students not already enrolled in the School of Education are encouraged to consult with the School of Education as early as possible. Please note that in choosing courses to meet the Liberal Arts requirements, students must keep their choice of liberal arts concentration or major in mind, including required number of upper division courses, and, whenever possible, choose courses that can also be used toward that concentration or major.

## Liberal Arts Requirements:

WRT 105 - Studio 1: Practices of Academic Writing or

WRT 109 - Studio 1: Practices of Academic Writing (Honors)
WRT 205 - Studio 2: Critical Research and Writing or

WRT 209 - Studio 2: Critical Research and Writing (Honors)

Algebra competency or
MAT 112 - Algebraic Operations and Functions
MAT 117 - Foundational Mathematics via Problem Solving I

MAT 118 - Foundational Mathematics via Problem Solving II

SCI 104 - Science-Questions and Quests: Physical Phenomena I

SCI 105 - Science-Questions and Quests: Physical Phenomena II
EDU 310 - The American School
CFE 444 - Schooling \& Diversity

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study

## - Distribution courses selected from an approved course list

U.S. History (3 credits)

History II (Diversity within the U.S or Global History) (3 credits)

Geography (3 credits)
Citizenship, Economics, and Government (3 credits)

Global Perspectives (3 credits)
Literature ( 6 credits)

## Other liberal arts breadth

(required only for those completing interdisciplinary concentrations.) Choose one course from the program's list of approved fine arts, philosophy, religion, mathematics or scientific perspectives courses (3 credits)

## Liberal Arts Concentrations Available:

The program requires students to complete a 30 -credit liberal arts concentration or major. This liberal arts area must be chosen as early as possible, so that maximum overlap between the liberal arts/general education requirements (see above) and the concentration/major may be achieved.

Human Thought and Expression concentration: study of literature, history, philosophy, religion, gender and ethnic studies, history and the arts, and other humanities;

People, Places and Societies concentration: study of anthropology, sociology, gender and ethnic studies, international relations, economics, geography, history, political science, and other social sciences;

## Mathematics

Natural Sciences

## Liberal Arts Majors Available:

African American Studies
English and Textual Studies;
History
Political Science
Sociology
A guide to assist in this choice is available from the Department of Teaching and Leadership, 150 Huntington Hall, or the Office of Academic and Student Services, 111 Waverly Avenue, suite 230.

## Professional Education

Requirements:
EDU 203 - Introduction to Inclusive Schooling
EDU 201 - Practicum in Pre-K Inclusive Education
EDU 303 - Teaching and Learning for Inclusive

Schooling
SPE 311 - Perspectives on Disabilities
CSD 303 - Communication in the Classroom
IDE 201 - Integrating Technology into Instruction I
EDU 366 - Safe and Healthy Learning Environments or equivalent, which includes the following topics: Identifying/reporting child abuse, violence prevention, child abduction prevention, highway/general safety, alcohol/ drug/tobacco prevention, fire and arson prevention, and training related to the Dignity for All Students (DASA) Act.

Arts in Education (complete 2 credits)
EDU 431 - Art in the Classroom
EDU 432 - Music in the Classroom
EDU 433 - Speech and Drama in the Classroom

## Pre-Block and Block reviews of progress

Both this program and the teaching profession are demanding, requiring not only appropriate attitudes about children, and skills in working with them, but also knowledge of the content to be taught, excellent writing skills, critical thinking skills, and much more. Students' progress is reviewed several times through the program against specific proficiencies and other assessment criteria. Effective for those entering the program Fall 2014 or later, to be eligible for Block I, students must have a 3.0 cumulative GPA a 3.0 average for and no grade below a B- in EDU 203, EDU 201, SPE 311, and EDU 303; a B- or better grade in each writing course taken; and a $B$ - or better average with no grade below a C in both the two required mathematics courses and the two required natural science courses, with at least one B- grade in each before entering Block I. In addition, they must have satisfactory ratings on the proficiencies and dispositions that are part of the professional courses and field experiences. Reviews also take place to determine eligibility to enter subsequent blocks, and additional information about this is available from the program faculty teaching in the blocks.

## Block I

EED 314 - Teaching Strategies for Inclusive Education

EED 325 - Primary Grade Literacy Methods and Curriculum
EED 361 - Block I Field Experience and Seminar

## Block II

EED 323 - Primary Grade Mathematics Methods
and Curriculum
EED 328 - Block II Field Experience
EED 362 - Block II Field Seminar
SPE 324 - Differentiation for Inclusive Education
EDU 434 - Creative Movement for the Classroom
IDE 301 - Integrating Technology into Instruction II

## Block III

EED 363 - Block III Field Seminar
EED 423 - Intermediate Grade Mathematics Methods and Curriculum

EED 425 - Intermediate Grade Literacy Methods and Curriculum
EED 438 - Block III Field Experience
IDE 401 - Integrating Technology into Instruction III

## Student Teaching Semester

EDU 508 - Student Teaching
EED 464 - Student Teaching Seminar/Inclusive Education

SPE 434 - Collaborative Teaching for Inclusive Education

## Mathematics Education (Dual),

 BS
## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements
(including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification
examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching

Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Mathematics Education

## Contact:

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In addition to the professional education requirements, students in mathematics education complete the Bachelor of Science in mathematics and the following requirements:

## Liberal Arts Core Specific <br> Requirements

Mathematics education majors must complete the Liberal Arts Core curriculum with these additional specific requirements:
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts related course within Arts and Sciences (HOA or HOM) or other approved humanities course focusing on one or more of the arts (3 credits)

One humanities course (cannot be history (HST) or arts related) (3 credits)
One multicultural humanities or social science course

Two course sequence in calculusbased physics
PHY 211 - General Physics I
PHY 212 - General Physics II
PHY 221 - General Physics Laboratory I
PHY 222 - General Physics Laboratory II

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established
by examination or level three of high school study

## Mathematics Content

The requirements for the B.S. in Mathematics must be completed ( 48 credits). Mathematics Education majors must follow the course requirement list below.
MAT 295 - Calculus I
MAT 375 - Introduction to Abstract Mathematics
MAT 296 - Calculus II
MAT 331 - First Course in Linear Algebra
MAT 397 - Calculus III
MAT 412 - Introduction to Real Analysis I
MAT 512 - Introduction to Real Analysis II
MAT 521 - Introduction to Probability
MAT 525 - Mathematical Statistics or
MAT 526 - Introduction to Stochastic Processes
MAT 531 - Second Course in Linear Algebra
MAT 534 - Introduction to Abstract Algebra
MAT 541 - Introduction to Number Theory
MAT 551 - Fundamental Concepts of Geometry
MAT 593 - History of Mathematics
One 400 level or higher mathematics course, by advisement (3 credits)

## Music Education, BMus

Music Education (Dual Program)

## Contact:

Elisa Dekaney, 109 Crouse College, 315-4434854 or emdekane@syr.edu

## Education Contacts:

Assistant Directors of Academic Advising, 111 Waverly Avenue, Suite 230, 315-443-9319.

## College of Visual and Performing Arts contact:

Marlene Lee, 200 Crouse College, 315-443-2517

## Faculty

John Coggiola, Elisa Dekaney, Patrick Jones

## Description

The music education program, which leads to a Bachelor or Music degree, is designed to give students a strong foundation in musical and
teaching skills and to enable them to obtain initial certification for public school teaching (all grades) in New York State and other states with which there are reciprocal arrangements.
Music education students are dually enrolled in the Setnor School of Music and the School of Education. They may elect one of five emphases: brass, choral/general, woodwind, percussion, or strings. By graduation, students are expected to have achieved competencies in all the musical disciplines (e.g., principal and secondary performance areas, music history and theory, sight-singing and dictation, and conducting and ensemble participation) in addition to teaching competencies in such areas as classroom management techniques and curriculum development skills. Students must have achieved a 3.0 average in music and education courses, with an overall GPA of at least 3.0 before being permitted to enter into the upper division sequence (junior year) and to student teach (senior year). Students also have opportunities to develop techniques of teaching general music as well as techniques for directing performance ensembles.
In addition to writing courses, academic credits are required in the following: 6 credits of social science (psychology or sociology), 3 credits in mathematics, 3 credits in the sciences, and 3 credits of multicultural humanities. One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study is also required. If requirement has already been met in high school or by examination, one 3-credit liberal arts elective must be taken in its place.

## Program Requirements

Major Requirements: 74-76 credits
PRINCIPAL PERFORMANCE AREA: 11 credits
SECONDARY PERFORMANCE AREA: 4 credits
(Keyboard Skills Unless Piano or Organ Student)

ENI 510 - Large Bands or
AMC 545 - Diction in Singing
AMC 546 - Diction in Singing (choral/general emphasis only)
CTG 545 - Basic Conducting
MTC 145 - Diatonic Harmony I
MTC 146 - Diatonic Harmony II
MTC 245 - Chromatic Harmony I
MTC 147 - Ear Training I
MTC 246 - Chromatic Harmony II
MTC 148 - Ear Training II

MTC 247 - Ear Training III
MTC 248 - Ear Training IV
MTC 418 - Choral Arranging or
MUE 115 - Technology in Music Education
MUE 215 - Foundations of Music Education
MUE 310 - Field Experience in Music Education (x2)

MUE 321 - Teaching of Voice for Schools
MUE 333 - Music in the Elementary School
MUE 334 - Methods and Materials in General Music

MUE 415 - Jazz Ensemble Techniques
MUE 518 - Marching Band Techniques or
MHL 567 - Choral Literature
RED 326 - Literacy Across the Curriculum
SED 340 - Participation in the Professional Development School (x7)

SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 204 - Principles of Learning in Inclusive Classrooms

EDU 310 - The American School
EDU 508 - Student Teaching (12 credits)
Music Electives: 14 credits
Instrumental Methods (x3) 1 credit Instrumental Methods/Pedagogy 1 credit Instrumental/Choral Rehearsal Techniques 3 credits
Choral or Instrumental Conducting 2 credits Jazz elective (x3) 1 credit
Piano or Voice (x2) 1 credit
Music History and Literature: 12 credits

MHL 168 - History of European Music before 1750

MHL 185 - Introduction to World Music
MHL 267 - European Music from 1750-1914
MHL 268 - European and American Music Since 1914

## Ensembles: 7 credits

Weekly Student Convocations: 0 credits

Required for Each Semester in Residence
Academic Requirements: 6 credits

WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing

## Academic Electives: 18-19 credits

Foreign Language 3-4 credits
Social Sciences (sociology or psychology) 6 credits

Mathematics 3 credits
Sciences 3 credits
Multicultural Humanities 3 credits

## Note:

Consult with the School of Education, 111 Waverly
Avenue, suite 230, regarding other New York State Teacher Certification requirements for graduation and certification.

## Degree Awarded: BMus in Music Education

## Physical Education, BS

## Contact:

315-443-2115, 820 Comstock Ave/201 Women's Bldg;

Syracuse University's nationally accredited Bachelor of Science (B.S.) degree in Physical Education meets the academic requirements for New York State initial certification for all grades, and teacher certification in states with reciprocal agreements. The New York Physical Education certification also qualifies teacher candidates to coach any sport (7-12) in any school in the state of New York.
The degree program emphasizes teaching methods that encourage all children to embrace a physically active lifestyle with a focus on urban and inclusive settings. The unique location of Syracuse University and the diversity of the surrounding community provide numerous authentic field experiences in urban and suburban settings alike starting in the first year. The School of Education affords its teacher candidates the advantages of resources found only at a major research university. Our undergraduate studies are enhanced with a strong liberal arts core and. Our small class sizes allow teacher candidates to develop strong, personal relationships with their professors, advisors, and peers.

Teacher candidates spend a minimum of 25 hours in the public schools each academic year, culminating with a full-time student teaching semester during which student teachers develop and teach several units of instruction and become involved with the school community. At a
minimum, the B.S. in Physical Education can be earned with the satisfactory completion of 120 credits.
The B.S. in Physical Education requires teacher candidates to attain a 2.8 GPA prior to senior year student teaching. Student teaching requirements include successful completion of the Child Health and Life Safety Seminar and CPR/AED and First Aid certifications.

## Program Requirements

## Liberal Arts Requirements

MAT 121 - Probability and Statistics for the Liberal Arts I or

MAT 221 - Elementary Probability and Statistics I
WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
PSY 205 - Foundations of Human Behavior
CRS 225 - Public Advocacy or
CRS 325 - Presentational Speaking
Humanities Elective (any) (3 credits)
Humanities Elective (PHI, REL or LIT only) (3 credits)

History (3 credits)
Arts \& Sciences elective (any) (9 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study. If Language requirement has been met, a 3 -credit liberal arts elective must be taken in its place.

## Natural Sciences

BIO 121 - General Biology I
NSD 225 - Nutrition in Health

## Professional Physical Education

PPE 177 - Introduction to Health and Physical Education

PPE 235 - Teaching K-12 Health-Related Fitness
PPE 295 - Introduction to Exercise Science
PPE 381 - Physical Education in the Elementary Schools

PPE 383 - Physical Education in the Secondary School
PPE 385 - Motor Behavior Across the Lifespan
PPE 394 - Assessment and Curriculum in Health and Physical Education

PPE 395 - Structural Kinesiology
PPE 408 - Analysis of Human Motion
PPE 415 - Physical Education Teacher Development
PPE 481 - Adapted Physical Education

## Professional Education

EDU 204 - Principles of Learning in Inclusive Classrooms
EDU 304 - Study of Teaching
EDU 508 - Student Teaching
RED 326 - Literacy Across the Curriculum
SPE 311 - Perspectives on Disabilities
CFE 444 - Schooling \& Diversity or
WSP 444 - Schooling \& Diversity or
EDU 310 - The American School

## Technology

(Choose 3 Credits)
IDE 201 - Integrating Technology into Instruction I
IDE 301 - Integrating Technology into Instruction II
IDE 401 - Integrating Technology into Instruction III

## Activity Courses

(10 Credits Total)
Required Activity Courses
PED 240 - Individual/Dual Sports
PED 250 - Team Sports
PED 262 - Gymnastics
PED 209 - Adventure Activities I
3 Credits of PED activity electives (choose three in consultation with your advisor)

## Aquatics

(choose 2 credits)
PED 211 - Beginning Swimming
PED 212 - Intermediate Swimming
PED 213 - Advanced Swimming
PED 216 - Water Safety Instruction *
PED 217 - Lifeguarding
Note:
*recommend WSI certification prior to student teaching

## Dance/Aesthetics

(Choose One)
DTS 231 - Introduction to Dance

DTS 228 - Basic Social Ballroom Dance
DTS 233 - African Dance

## Open Elective:

Any course (3 credits)

Required Child Health and Life Safety Seminar<br>Covering the Following Topics:<br>Identifying/reporting child abuse<br>Violence prevention<br>Child abduction prevention<br>Highway/general safety<br>Alcohol/drug/tobacco prevention<br>Fire and arson prevention

## Note:

*CPR/AED/FA certification must be valid during student teaching
*WSI certification recommended prior to student teaching

Science Education-Biology (Dual), BA<br>Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly
greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/ or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information
is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

The Professional Core Requires:
EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or
SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse

Student Needs
EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230, and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising
hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Biology

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.
In addition to the professional education requirements, students in science education complete the Bachelor of Arts or the Bachelor of Science* with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences
(HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)
One humanities course (other than history (HST) or fine arts related (3 credits)

One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* biology major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Biology majors typically use their chemistry sequence for this.

## Note:

*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for biology

Science Education-Biology (Dual), BS

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of

Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history ( 3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*

EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning.
Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

Science Education-Biology
Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.

In addition to the professional education requirements, students in science education complete the Bachelor of Arts or the Bachelor of Science* with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or fine arts related (3 credits)

One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* biology major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Biology majors typically use their chemistry sequence for this.

## Note:

*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for biology

## Science Education-Chemistry (Dual), BA

Arts and Sciences/Education

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

The Professional Core Requires:
EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester.

EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Chemistry

## Science Education Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/ or
electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related) (3 credits)
One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S. ${ }^{*}$ chemistry major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Chemistry majors typically use the required physics sequence for this.

## Note:

*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for chemistry.

## Science Education-Chemistry (Dual), BS

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies

Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the
candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be
completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Chemistry

## Science Education Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu

In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3
credits)
One humanities course (other than history (HST) or arts related) (3 credits)

One multicultural humanities or social science course (3 credits)

One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

In addition to the B.A. or B.S.* chemistry major requirements** or as part of the major's nondepartmental science requirements, students must complete an introductory laboratory sequence in a second science area. Chemistry majors typically use the required physics sequence for this.

## Note:

*The B.S. degree requires additional science courses, paperwork, and an appropriate petition.
** See specific departmental major course requirements for chemistry.

Science Education-Earth Science (Dual), BA

Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of
all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified
subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Earth Science

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.

In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related (3 credits)

One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education/earth science majors are required to complete no fewer than 30 credits in earth sciences. Because the B.A. in Earth Sciences may be completed with 25 credits in Earth Sciences, students in Science Education must take 5 additional credits. Four of these five credits must be AST 101 or 104.

In addition to the earth sciences requirements** or as part of the major's non-departmental science requirements, students must complete an introductory laboratory sequence in a second science area, not including astronomy - i.e., the second science sequence may be in $\mathrm{BIO}, \mathrm{CHE}$, or PHY. When choosing the second science area, earth sciences majors should keep prerequisites to upper division EAR courses in mind.

## Note:

** See specific departmental major course requirements for earth sciences.

## Science Education-Earth Science (Dual), BS

## Arts and Sciences/Education

 (Dual)
## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127
credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts,
professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*
EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or
SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

Standard Student Teaching Semester
(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor
is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Earth Science

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history
(HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)
One humanities course (other than history (HST) or arts related (3 credits)

One multicultural humanities or social science course (3 credits)

One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education/earth science majors are required to complete no fewer than 30 credits in earth sciences. Because the B.A. in Earth Sciences may be completed with 25 credits in

Earth Sciences, students in Science Education must take 5 additional credits. Four of these five credits must be AST 101 or 104.
In addition to the earth sciences requirements** or as part of the major's non-departmental science requirements, students must complete an introductory laboratory sequence in a second science area, not including astronomy - i.e., the second science sequence may be in $\mathrm{BIO}, \mathrm{CHE}$, or PHY. When choosing the second science area, earth sciences majors should keep prerequisites to upper division EAR courses in mind.

Note:
** See specific departmental major course requirements for earth sciences.

Science Education-Physics (Dual), BA

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers
provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts ( 3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)* EDU 310 - The American School (3 credits)* RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester <br> (fall of the senior year)

Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.

Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

Standard Student Teaching Semester
(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education,
in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Physics

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.

In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or a Bachelor of Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:

One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)

One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related) (3 credits)

One multicultural humanities or social science course (3 credits)
One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education majors are required to complete a major of no less than 30 credits of physics (PHY) courses.
In addition to the physics requirements** students must complete an introductory laboratory sequence in $\mathrm{BIO}, \mathrm{CHE}$, or EAR.

## Note:

* The B.S. degree may be earned in the primary science area as an alternative to the B.A. with the completion of additional science requirements,
paperwork, and an appropriate petition.
** See specific departmental major course requirements for physics.


## Science Education-Physics (Dual), BS

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.
The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.
Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education.

Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*

EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.
EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.


## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.

LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.

EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Science Education-Physics

## Contact:

John W. Tillotson, 112 Heroy Building, 315-4439137, jwtillot@syr.edu.
In addition to the professional education requirements, students in science education complete the Bachelor of Arts* or a Bachelor of

Science with a major in the primary science area and the following requirements:

## Liberal Arts Core Specific Requirements

Within the Liberal Arts Core, major, and/or electives, students must include specific liberal arts distribution courses that are not required of other Arts and Sciences students. Details are given below. Science education majors must include:
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts-related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or arts related) (3 credits)
One multicultural humanities or social science course (3 credits)

One approved calculus course (3-4 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Science Content

Science education majors are required to complete a major of no less than 30 credits of physics (PHY) courses.

In addition to the physics requirements** students must complete an introductory laboratory sequence in BIO, CHE, or EAR.

## Note:

* The B.S. degree may be earned in the primary science area as an alternative to the B.A. with the completion of additional science requirements, paperwork, and an appropriate petition.
** See specific departmental major course requirements for physics.


## Selected Studies in Education, BS

## Contact:

Mario Rios Perez, 354 Huntington Hall Phone, 315-443-9077, mrperez@syr.edu

Designed for Syracuse University students who are interested in education careers but not
currently pursuing a teaching certificate, selected studies in education offers a path to a bachelor's degree through a program tailored to a student's individual interests, skills, and aspirations. Selected studies in education is for students planning to enter fields that contain strong educational components, including educational media, international education, clinical mental health, school, and student affairs counseling, instructional design, development, and evaluation, higher education, child advocacy and youth programming, education and family law, museum studies, disability studies, and related fields.

## Program Requirements:

Students must complete the following requirements, including at least 42 credits at the upper-division level:
30 credits in education (including a minimum of 18 credits in one of the four selected studies individual focus areas, outlined below)
a minor or major in a liberal arts field related to the course of study;
liberal arts distribution requirements (the liberal arts major or minor plus distribution requirements and liberal arts electives must total at least 60 credits.);
at least 6 credits in a language other than English (all students are required to take at least two semesters of language other than English while at Syracuse, even if they have previously developed competence in another language through high school preparation or by some other means);
one semester of study abroad or an intensive semester experience in Syracuse or another part of the U.S. that would broaden the student's experience with diversity in a distinct way;
at least 6 credits in research methods (this requirement can be satisfied with courses taken as part of the required 30 credits in education);
an internship or several intensive experience projects that allow the student opportunities to apply and enhance skills learned in the program (minimum of 6 credits).

## Admission:

A 2.8 grade point average is required for admission to this program and to remain in good academic standing in the program.

## Core in Education

Students are required to complete the following core courses in education (15 credits):

EDU 200 - Selected Topics Education for Cultural and Social Transformation
EDU 310 - The American School
EDU 300 - Selected Topics International Education for Cultural and Social Transformation

CFE 444 - Schooling \& Diversity
EDU 400 - Selected Topics Research and Theory in Education for Cultural and Social Transformation

## Liberal Arts Distribution Requirements

All students in the Selected Studies in Education program are advised to complete a set of liberal arts requirements. These are:
Two mathematics courses (6 credits)
Two science w/lab courses (8 credits)
Three writing courses (WRT 105, WRT 205, and WRT 307) (9 credits)

Two foreign language courses ( $6-8$ credits)
One history course (3 credits)
One multicultural social science course ( 3 credits)
One multicultural humanities course (3 credits)
Eight liberal arts (Arts and Sciences) electives (24 credits)

## Liberal Arts Majors or Minors

Students are advised to complete a full major or an approved concentration in a liberal arts field as part of their program in selected studies in education. A complete list of available majors, minors and concentrations can be found in the Undergraduate Course Catalog; students may develop their own individualized multidisciplinary majors with the assistance of their advisor and permission of liberal arts departments in the College of Arts and Sciences.

## Individual Focus Areas in Education

Students must choose at least 18 credits of coursework from approved courses in education based on their thematic or career focus. Students satisfy this requirement by taking courses listed in any of the focus areas below. Students may make substitutions with the approval of their advisors. The four focus areas to choose from are:

> Cultural Foundations of American Schooling: Schooling and Diversity

This focus is suitable for students who may want to pursue any of the following career interests: seek a teaching career at a future point; work with youth in non-school settings; enter the educational media field; or work in public policy settings that focus on public schooling. Students interested in this focus area might also want to choose courses from the pre-teaching focus or the education, technology, and media focus.

## Pre-Teaching: Study of Teaching, Learning, and Inclusion

This focus is suitable for students who may wish to pursue a career in teaching after completing their undergraduate program. Courses in this focus area may include the study of early childhood, elementary, or secondary education, as well as issues of diversity, disability, regular education, special education, and inclusion within schools. Students in this focus area will have significant experiences in public schools during the course of study. Students interested in pre-teaching may want to consider taking relevant courses from other focus areas.

## Education, Technology, and Media

This focus is ideal for students who have an interest in the integration of media and technology in various learning contexts. Students learn media literacy skills and gain an understanding of how popular culture influences the promotion and transmission of cultural values within our society. Students interested in this focus may want to consider taking relevant courses in the cultural foundations of American schooling focus.

## Post-Secondary and Human Services Fields

This focus is suitable for students wishing to work in a variety of educational settings, including higher education, international education, and as non-teaching personnel in primary and secondary schools. Whether students are interested in pursuing a graduate degree in a human services field or in seeking employment immediately after undergraduate studies, this focus area will provide an introduction to the general study and provision of human and social services to individuals, families, and communities in public and private human service agencies and organizations. The focus provides a strong foundation for graduate work in such fields as clinical mental health, school, and student affairs counseling, social work, marriage and family therapy, psychology,
and higher education. ${ }^{* * * T h i s ~ f o c u s ~ a l s o ~ h a s ~ t h e ~}$ "fast-track" option for students to begin graduate study toward an Master of Science degree in counseling during their senior year at SU. See description below.

## Fast Track to Professional Counseling

This track is designed for highly motivated and focused students interested in pursuing a master's degree in clinical mental health, school, or student affairs counseling upon completion of their undergraduate degree in Selected Studies in Education, following the 'post-secondary and human services fields' track. Students work closely with their advisor to develop a plan of study that will allow them to complete the majority of their undergraduate degree requirements for the Selected Studies in Education program prior to their senior year.
Students in this track who maintain at least a 3.0 GPA, and take the GRE, are eligible to apply for one of the following master's degree programs during their junior year:
Clinical Mental Health Counseling
School Counseling
Student Affairs Counseling
Admitted students, with advisor approval, will be able to take up to 18 graduate credits toward their master's degree during their senior year. Admitted students will matriculate into the master's degree program the semester following completion of their undergraduate degree.
One of the primary benefits of this track is that students save time and tuition costs in two ways:
The ability to apply their undergraduate financial aid package toward graduate credits during their senior year.

Eligible to receive the 33\% Graduate Student Tuition Scholarship for the remainder of their full-time master's program.

Benefits include saving time and the cost of graduate tuition. Students save time by accruing graduate credits during their senior year; they save additional money because they are also eligible to receive the 33\% Graduate Student Tuition Scholarship for the remainder of their full-time master's program.

## Social Studies Education (Dual), BA

## Arts and Sciences/Education (Dual)

## Arts and Sciences contact:

Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).

Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu
In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science or social studies, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); or social studies education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.

Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or
psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English and Social Studies Education students complete this as part of their major in the subject area.) (3 credits)

When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.

All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.

A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirement information is provided in this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms (4 credits)*

EDU 304 - Study of Teaching (4 credits)*
EDU 310 - The American School (3 credits)*
RED 326 - Literacy Across the Curriculum (4 credits)*
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Semester

(fall of the senior year)
Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Semester: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in content (subject matter) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching or

SCE 413 - Methods and Curriculum in Teaching Science or

SED 413 - Methods and Curriculum in Teaching
SPE 412 - Adapting Instruction for Diverse Student Needs

EDU 508 - Student Teaching Secondary/ Candidacy (3 credits required)

Standard Student Teaching Semester (spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching English (9 credits)
SED 416 - Assessment \& Data-Driven Instruction English (3 credits)

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences
and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.

Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.

Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Social Studies Education

## Contact:

Jeffery Mangram, 150 Huntington Hall, 315-4432685 or jamangra@syr.edu
In addition to the professional education requirements, students in social studies education complete the Bachelor of Arts in a social science subject area and the following requirements:

## Liberal Arts Core Specific Requirements

Social studies education majors must complete the Liberal Arts Core curriculum with these additional specific requirements:
One mathematics course-Statistics (MAT 121 or MAT 221) is recommended (can also meet
one of the program's research requirements) (3 credits)

One arts related course within Arts and Sciences (HOA or HOM or other approved humanities course focusing on one or more of the arts) (3 credits)

One humanities course (other than history (HST) or fine arts (HOA or HOM)) (3 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study.

## Social Studies Content

Social studies majors are required to complete a major in an area chosen from African American studies, anthropology, economics, geography, history, international relations, political science, policy studies, or sociology. If African American Studies, anthropology, or geography, all courses other than required courses must be social science classes. Because 18 credits of history are required, no matter what social science major is chosen, most students complete the history major.
If history is not the chosen major, the following 18 credits of history must also be completed:

HST 101 - American History to 1865
HST 102 - American History Since 1865
HST 111 - Early Modern Europe, 1350-1815
HST 112 - Modern Europe: Napoleon to the Present

One nonwestern history course (3 credits)
One upper-division history (300-level or above) by advisement (3 credits)

## Additional Information

All majors must complete a course in economics (ECN), political science (PSC), human/cultural geography (GEO) from the social science list and one course from a list of approved "global" courses (which may overlap with other requirements).

All majors must complete EDU 522-Social Studies and Democracy: The Reconstruction of Education and three other courses that are considered social science research methods or theory based courses.

## Note:

* See specific departmental major course requirements for your chosen content major.

Spanish Education (Dual), BA
A\&S/EDUC Spanish Ed (DUAL)

## Arts and Sciences

 contact:Shruti Viswanathan, Director of Academic Advising and Counseling, 323 Hall of Languages, 315-443-3150.

## Education contacts:

Pam Hachey (pkhachey@syr.edu) or Carol Radin (cvradin@syr.edu) Sheila DeRose, Office of Academic and Student Services, 111 Waverly Avenue, Suite 230; 315-443-9319 (for intrauniversity transfer).
Joanna Masingila, 230 Huntington Hall, 315-4434751, jomasing@syr.edu

In order to meet the academic requirements for New York State certification to teach in the academic areas of English, mathematics, science, social studies, or Spanish, dual enrollment in both the College of Arts and Sciences and the School of Education is required. Completion of all College of Arts and Sciences requirements (including the Liberal Arts Core with courses from specific categories and a major in one of the listed content areas), combined with 37-40 credits of education courses (including methods and student teaching), for a total of 124-127 credits, are required. Some students may need to complete total program credits that are slightly greater than 124-127. In addition, completion of New York State testing and other certification requirements apply. Please see the following detailed information.

The dual programs for prospective teachers provide a broad general education (the Liberal Arts Core of the College of Arts and Sciences), depth in the content area to be taught, and professional coursework and field experiences focusing on the skills and knowledge necessary to teach students from diverse backgrounds and with varying abilities.

Students in the dual programs complete a program of study offered jointly by the College of Arts and Sciences and the School of Education: English education; mathematics education; science education (biology, chemistry, earth science, or physics); social studies education, or Spanish education. Students also complete the requirements for a College of Arts and Sciences major in the subject area.
Within the Liberal Arts Core, major, and/or electives, students must include one course from the following:
mathematics (MAT 112 may not meet this requirement) (3 credits)
history (3 credits)
social science course other than history or psychology (3 credits)
arts and culture/HOA or HOM, or other approved humanities course focusing on one or more of the arts (3 credits)
humanities course other than arts and culture or HST (3 credits)
approved humanities or social science course with non-Western content (list is available from the education advisor. English, Social Studies and Spanish Education students complete this as part of their major in the subject area.) (3 credits)
When planning their sequence of courses, students should keep in mind that at least 9 credits of education including student teaching are required in the fall of the senior year in order to meet the prerequisites for the spring student teaching experience. As many content (subject area) courses as possible should be completed by the end of the junior year.
All programs meet the academic requirements for New York State initial adolescence education certification to teach grades 7-12 in the specified subject. Successful completion of certification examinations, an application and a background check are also required for New York State teacher certification.
A core of professional requirements shared by all of these is as follows. Additional liberal arts, professional, and other requirements are described on page two of this section. More detailed information is available from the program coordinator.

## Professional Education Core Courses

The professional sequence includes coursework, field experience and student teaching, and requirements other than coursework, described below.

## The Professional Core Requires:

EDU 204 - Principles of Learning in Inclusive Classrooms
EDU 304 - Study of Teaching
EDU 310 - The American School
RED 326 - Literacy Across the Curriculum
EDU 366 - Safe and Healthy Learning Environments

## Note:

* EDU 304 and RED 326 should be taken after

EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be taken before the first professional semester. EDU 310 may be taken before, or after (extra semester) professional semesters.

EDU 366 or the equivalent Child Health and Life Safety Workshops and DASA training must be completed before the first student teaching semester.

## Candidacy Courses

Note: The semesters of registration listed are for students completing the program in four years. Others would adjust accordingly, with the candidacy and second professional semester as late in the program as possible.
Prerequisites to Candidacy Courses: Enrollment in the specific program; development of an acceptable professional portfolio (reviewed prior to the candidacy semester); a minimum 3.0 cumulative average, and 3.0 in both required education and in Spanish (content) courses; completion of EDU 204 and EDU 304, EDU 366, RED 326, and the number of content courses required by the program; a Spanish proficiency test with a result of advanced-mid or higher on the ACTFL proficiency scale; and appropriate progress toward meeting all of the program assessment proficiencies and dispositions.
LIN 421 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching (spring, junior year)
SPE 412 - Adapting Instruction for Diverse Student Needs (fall, senior year)

EDU 508 - Student Teaching (fall, senior year)

## Standard Student Teaching Semester

(spring of the senior year)
Prerequisites: Successful completion of the candidacy semester and acceptable professional portfolio; completion of the required amount of credits in the content area; grade point averages at or above the minimums stated above; successful review of all appropriate student assessment proficiencies and dispositions.
EDU 508 - Student Teaching
SPA 403 - Advanced Methods for Teaching Spanish

## Additional Information

Because this student teaching placement is a full-time, multi-week experience, no other daytime courses can be taken, and it is not advisable to plan more than 12 total credits in this semester, unless approved by an advisor.

## Admissions

A minimum of a 3.0 grade point average is required for admission to the Arts and Sciences and Education dual enrollment programs. GPA requirements for admission to the candidacy and standard student teaching semesters, and other prerequisites to these semesters are mentioned above. Additional requirements may apply to some programs.
Intra-University transfer to the School of Education is coordinated through the Office of Academic and Student Services, 111 Waverly Avenue, suite 230 , and a course sequencing plan must be completed at the time of application with the Program Specialist in the Department of Teaching and Leadership. Upon acceptance into a dual program, the student should also complete the official program of study form required by the College of Arts and Sciences. Students may not declare a major in an Arts and Sciences/ Education program until they are accepted by the School of Education. Application should be made as soon as possible, but must be made no later than the start of the fall of the junior year by those hoping to complete the program in four years (although even then extra semesters may be necessary).

## Advising and Special Services

A dually enrolled student has an advisor in each college or one advisor dually appointed to both colleges. Early contact with the education advisor is important for progress and careful planning. Contact is also required before each registration in order to have the School of Education advising hold lifted.
Students planning graduation from these programs are expected to ensure a senior check has been completed with the School of Education, in addition to similar monitoring by the College of Arts and Sciences. They also may take advantage of the job search services of the Education Career Services Office, 111 Waverly Avenue, suite 230.

## Spanish Education

## Contact:

M. Emma Ticio328 HBC, 315-443-5488 or mticioqu@syr.edu

In addition to the professional education requirements, students in Spanish education complete a major in Spanish and the following requirements:

## Liberal Arts Core Specific Requirements

Secondary Spanish education majors must complete the Liberal Arts Core curriculum with
these additional specific requirements:
One mathematics (MAT) course from Liberal Arts Core Quantitative Skills List or MAT 117 or MAT 118 (3 credits)
One approved history (HST) course (3 credits)
One social science course (other than history (HST) or psychology (PSY)) (3 credits)
One arts related course within Arts and Sciences (HOA or HOM, or other approved humanities course focusing on one or more of the arts) (3 credits)

## Additional Information

If available, these may be courses taught in Spanish.

## Spanish Content

Spanish Education students must complete the Spanish Language, Literature and Culture major as defined by the Languages, Literature and Linguistics Department, with additional Spanish credits.. 33 credits are required at the 300 level and above, with 21 ( 7 courses) of these at the 400 level. Spanish Education students must complete the following courses (including some not required of other Spanish majors) within their programs, with 15 of the course credits completed on the SU campus:

SPA 301 - Approaches to Reading Texts
SPA 302 - Advanced Language Usage
SPA 321 - Introduction to Spanish Literature
SPA 322 - Introduction to Latin American Literature

SPA 435 - Spanish Phonetics and Phonology
SPA 436 - The Structure of Spanish
SPA 4XX - 1 course of Latino Literature (3 credits)
SPA 4XX - 2 courses of Latin American Literature (6 credits)
SPA 4XX - 2 courses of Spanish Peninsular Literature ( 6 credits)

## Additional Information

LIN 421 and SPA 403 do not count toward the required 90 Arts and Sciences credit. EDU 310 does count toward the required 90 Arts and Sciences credits.

If study abroad is planned, it may not be completed in the spring of the junior year or in the senior year because of required on-campus courses.

## Minor

Disabilities Studies Minor

## Contact:

Alan Foley
152 Huntington Hall
315-443-5087
afoley@syr.edu
Program website: http://disabilitystudies.syr.edu
The minor in Disability Studies focuses on disability as a social and cultural phenomenon, identity, social construct, and metaphor. Disability Studies applies social, cultural, historical, legal, philosophical, and humanities perspectives to understanding disability in society. Topics covered in Disability Studies include disability law and policy, the sociology, anthropology, geography, and history of disability, the intersection between disability and race, gender, sexuality, and class, the representation of disability in literature, the media, and popular culture, advocacy and self-advocacy, and assistive technology and accommodations for people with disabilities. The Disability Studies minor does not focus on instructional or clinical approaches to disability, but can complement the studies of students in these programs.

The minor requires 18 credits, with 12 credits in Disability Studies courses and 6 credits of electives. At least 12 credits must be taken in 300 level or above courses. Courses must be approved by the student's advisor in Disability Studies. Courses in the minor may be able to be used to fulfill requirements in students' home schools and colleges, at their discretion.

## Requirements for Admission

A minimum grade point average of 2.8 and a one-to-two page personal statement describing the student's interest in the minor in Disability Studies.
Restrictions on Applications: None. Students from any Syracuse University undergraduate program can apply for the minor in Disability Studies.

## Core Courses

Students must take a minimum of 12 credits in Disability Studies courses.

DSP 432 - Gender and Disability
DSP 438 - Disability and Popular Culture or
WGS 438 - Trans Genders and Sexualities
DSP 426 - Representations of Ability \& Disability or

SOC 426 - Social Issues and Deliberative Democracy
DSP 440 - Sociology of Disability (submitted to SCC)

DSP 357 - Deafness and Disability (submitted to

SCC)
DSP 475 - Internship in Disability Policy (submitted to SCC)

## Additional Information

With the approval of the minor advisor, students may use credits from other Syracuse University courses without a DSP prefix to fulfill the requirement for 12 credits in core courses.

## Electives

Students may take up to 6 credits in electives, subject to the approval of an advisor. Possible courses include, among others:

CFE 362 - Youth, Schooling and Popular Culture or DSP 362 - Youth, Schooling and Popular Culture
CFE 444 - Schooling \& Diversity
WRT 428 - Studies in Composition, Rhetoric and Literacy
WRT 440 - Studies in the Politics of Language and Writing
SOC 355 - Sociology-of Health and IIIness
SOC 364 - Aging and Society
SOC 433 - Race, Class, and Gender
SWK 326 - Persons in Social Context
ANT 455 - Culture and AIDS
GEO 372 - Political Geography
PSC 328 - American Social Movements

## Education Studies Minor

## Contact:

George Theoharis, 163 Huntington Hall, 315-4439079 or gtheohar@syr.edu
Education studies provide useful skills and experiences for students not enrolled in the School of Education, who go on to pursue careers in communication, business, science, or the arts. The minor in education is purposely broad in scope to allow students to accomplish any and all of the following objectives: (1) to explore education as a professional field of study, (2) to learn about issues in and the practice of education, (3) to prepare for graduate programs in education and related professional fields, and (4) to develop experience in direct work with children and adults through education and counseling.

The minor alone does not provide teacher certification. Students who want to complete prerequisites that will help them more expeditiously complete a master's degree in teaching, counseling, instructional development, or other related education fields should consult with a faculty advisor in education about their
career plans. Students interested in teacher certification through an SU undergraduate program must enroll in one of the teaching preparation programs offered by the School of Education (in some cases with another SU college).
Course selection for the minor should be done in consultation with the minor advisor. The minor will consist of 18 credits, including general courses in education and several that are focused on a particular area of education. At least 12 credits must be 300 level or above.

A 2.5 grade point average is required for admittance to the minor.

## Core Requirements (minimum 6 credits):

## Students must take:

EDU 310 - The American School

## Students will take one of the options below:

EDU 203 - Introduction to Inclusive Schooling or EDU 304 - Study of Teaching

## Electives (12 credits):

Note: Below is a list of possible electives for the education studies minor. Some of these courses are offered every semester and some are offered less regularly. Students, in consultation with the minor advisor, will design a program to include the electives that best meets their interests from the list below or other possible education courses such as selective topics courses where there are new ones offered regularly. Courses subject to availability and permission may be required from the department for entry into some of them.
AED 211 - The Creative Classroom: Reexamining
School Art Misconceptions Through Studio
Inquiry
AED 317 - Philosophy \& Foundations of Art Education Practice

ASL 101 - American Sign Language I
ASL 102 - American Sign Language II
ASL 201 - American Sign Language III
CFE 362 - Youth, Schooling and Popular Culture
CFE 444 - Schooling \& Diversity
COU 585 - General Counseling Methods
DSP 357 - Deafness and Disability
DSP 432 - Gender and Disability
DSP 438 - Disability and Popular Culture
DSP 440 - Sociology of Disability

EDU 204 - Principles of Learning in Inclusive Classrooms or

EDU 303 - Teaching and Learning for Inclusive Schooling

EDU 270 - Experience Credit
EDU 470 - Experience Credit
EDU 290 - Independent Study
EDU 490 - Independent Study
EDU 221 - Education for Transformation
EDU 321 - International Education for Transformation

EDU 522 - Social Studies and Democracy: The Reconstruction of Education

EDU 355 - Fundamentals of Teaching for NonMajors

EDU 431 - Art in the Classroom
EDU 432 - Music in the Classroom
EDU 433 - Speech and Drama in the Classroom
ELL 301 - Tutoring English Learners in Schools within the US and Abroad

HEA 332 - Personal Health and Safety
IDE 456 - Computers as Critical Thinking Tools
IDE 552 - Digital Media Production
MUE 215 - Foundations of Music Education
PPE 177 - Introduction to Health and Physical Education

SPE 311 - Perspectives on Disabilities
RED 512 - Children's and Adolescent Literature

## Exercise Science Minor

## Contact:

Melissa Tobin, 209 Ernie Davis Hall, 315-4439800; mmtobin@syr.edu.
Students pursuing major degrees in other program areas may enroll in a minor in exercise science. The exercise science minor requires 18 credits. Students must maintain a minimum 2.5 GPA. To be admitted into the exercise science minor, students must submit a petition to their respective advisor, the chair of the exercise science program, and to the assistant dean for academic and student services in the School of Education.
BIO 216 - Anatomy \& Physiology I \& BIO 217 Anatomy and Physiology II are prerequisites for many of the courses in this minor.

## Core Courses

Section I: The following courses are required ( 6 credits):

PPE 295 - Introduction to Exercise Science
PPE 497 - Physiology of Exercise
Section II: Three of the following courses are required (9 credits):

PPE 408 - Analysis of Human Motion
PPE 483 - Scientific Principles of Conditioning
PPE 514 - Exercise and Aging
PPE 515 - Graded Exercise Testing and Interpretation

PPE 517 - Pathophysiology
PPE 518 - Cardiac Rehabilitation
Or Any 3 credit 500-level or higher course such as:

Exercise in the Cell (3 credits)
Obesity and Body Composition (3 credits) Metabolic Aspects of Exercise (3 credits)

Control of Ventilation in Exercise (3 credits)
Section III: One of the following courses is required (3 credits): PPE 385 - Motor Behavior Across the Lifespan PPE 486 - Prevention and Care of Athletic Injuries HEA 485 - Worksite Health Promotion

## Note:

Or any of the courses listed in Section II not already taken.

## Total Credits: 18

## Time to Completion Requirement:

The undergraduate minor in exercise science must be completed within five years of declaration if the student is enrolled in an undergraduate degree granting program.

## Exercise Science Minor (Dance)

## Contact:

Suzanne K. Oliver, 314-443- 2908, 204A
Women's Building

## Requirements for Admission and Restrictions

The minor in dance is available to matriculated, undergraduate students from all Syracuse University schools and colleges, provided that they have the permission of their home school
or college, and have a cumulative GPA of at least 2.8. Some background knowledge and experience in dance is seen as beneficial for prospective dance minor applicants, but not required.

Due to course sequencing and enrollment limitations, students must have a minimum of four semesters available to complete the minor requirements. Any student wishing to apply for the Dance Minor after the Spring semester of her/his sophomore year, must have one or more courses completed, or in progress.

## The Program

Pre-requisites
DTS 239 - Beginning Ballet I *

## Required Courses

DTS 241 - Beginning Ballet II *
DTS 242 - Intermediate Ballet I or
DTS 243 - Intermediate Ballet II
DTS 244 - Beginning Modern I * or
DTS 245 - Beginning Modern II
DTS 246 - Intermediate Modern I or
DTS 247 - Intermediate Modern II
DTS 368 - History and Appreciation of Western Dance

DTS 423 - Basic Concepts of Choreography
PPE 395 - Structural Kinesiology

## Choice of Two Courses

DTS 233 - African Dance
DTS 228 - Basic Social Ballroom Dance
DTS 235 - Beginning Jazz I
DTS 236 - Beginning Jazz II
DTS 234 - Tap I
DTS elective course (1 credit)

## Choice of One Course

PPE 486 - Prevention and Care of Athletic Injuries
NSD 425 - Nutrition for Fitness and Sports ** or
NSD 447 - Weight Management, Obesity and Disordered Eating ***

## Total Credits 18

## Additional Information

*May be waived if you exhibit advanced technique. You may then choose, with proper advisement, additional course work to ensure a total of 18 credits.
**NSD 225 - Nutrition in Health is a prerequisite for both NSD 425 and NSD 447
***Other courses (300 level and above) may be substituted with Dance Minor Coordinator's approval.

## To Declare a Minor In Dance

Check with your home school or college office, to make sure you have room in your program for the required number of dance courses. Also reconfirm that you have a cumulative GPA of at least 2.8.

Pick up a minor declaration form in Women's Building, Room 201.

Bring the minor declaration form to WB201 before the deadline. If you are approved, you will be notified by email, and asked to retrieve the form.

Take the signed form to your home school or college office. They will approve the declaration, and give you instructions about how to get the minor officially posted to your SU record.

## Jewish Education Minor

## Coordinator:

Corinne Roth Smith, Professor
157 Huntington Hall, 315-443-9321, crsmith@ syr.edu
The primary purpose of this minor is to better prepare SU undergraduates to teach in Jewish congregational schools, camps, community centers, youth organizations.

## Admission:

## GPA 2.8 or above

1-2 page statement on why the individual would like to declare a minor in Jewish Education

The JSP Director and Jewish Education Minor Coordinator will review each candidate's courses completed and professional disposition standards before recommending a student for a community internship. Those not approved will be asked to un-declare the minor.

## Curriculum Requirements

Core Courses: ( 6 credits)
JSP 114 - The Bible
JSP 215 - The Hebrew Bible
JSP 135 - Judaism
Additional Judaic Studies Content (9
credits)
Must be 300 level and above
Must include courses cross-listed with JSP, including those offered abroad. Other courses with Judaic Studies content can be approved by the JSP director.
One course in history, sociology or political science is strongly recommended.

Pedagogy Courses (7-9 credits):
EDU 303 - Teaching and Learning for Inclusive Schooling (includes field experience) or

EDU 204 - Principles of Learning in Inclusive Classrooms (includes field experience)

## Students in Teacher Preparation Programs

Students in Teacher Preparation Programs will overlap this course with their education major.
EDU 355 - Fundamentals of Teaching for NonMajors (course to be regularized). Students in Teacher Preparation Programs may substitute a methods course from their teacher preparation area for this course.

EDU 470 - Experience Credit (Practicum in Jewish Education (1-2 cr.)) (non-teacher preparation majors complete two credits/semesters, and enroll concurrently with EDU 355 ; Teacher Preparation majors complete one credit/ semester and enroll in their field specific methods course prior to or concurrent with EDU 470):

The practicum semester(s) will include sessions during which congregational/agency educators convey supplementary information on Jewish traditions, modes of thought, and teaching strategies.

Total Credits: 22-24

## Additional Hebrew requirement:

Students must complete HEB 101 (4 cr.), or achieve placement test results placing them into HEB 102 or higher. (Students are not required to take HEB 102, however). This requirement must be completed before the internship semester.

Note:
Students in the Inclusive Elementary and Special Education program can best fit the Judaic Studies courses into their curriculum if they are Human Thought and Expression concentrators.

## Physical Education (Coaching) Minor

Dr. Michael L. Norris, mInorris@syr.edu, 315-443-

9776; 820 Comstock Ave/204F Women's Bldg.
The coaching minor is designed for students who wish to coach in secondary schools (grades 7-12). Coursework extends beyond the 8 credits required for the New York State Temporary Coaching License. Prerequisite: 2.5 grade point average.

## Required Courses

PPE 325 - The Philosophy, Principles and
Organization of Athletics in Education
PPE 326 - Theory and Techniques of Coaching
PPE 327 - Health Sciences Applied to Coaching

## Select 10 Additional Credits from Any of the Following

PPE 486 - Prevention and Care of Athletic Injuries
NSD 225 - Nutrition in Health
HEA 335 - First Aid
HEA 336 - Cardiopulmonary Rescue
PPE 385 - Motor Behavior Across the Lifespan
PPE 435 - Introduction to Sports Psychology
PPE 483 - Scientific Principles of Conditioning

## Total Credits: 18

Note:
EDU 366 (formerly EDU 400) Safe and Healthy Learning Environments (1 credit), or equivalent, which includes the following topics: Identifying/ reporting child abuse, violence prevention, child abduction prevention, highway/general safety, alcohol/drug/tobacco prevention, fire and arson prevention, and training related to the Dignity for All Students (DASA) Act is not required for the minor. However, this course is a requirement for the New York State Coaching Certification.

Fingerprinting is also required for appointment to coaching positions.

## Combined Degree

African American Studies Secondary Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in African American Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Anthropology Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Anthropology and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Biology Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Biology and Secondary Science Education (Biology) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education
master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Biology Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Biology and Secondary Science Education (Biology) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Chemistry Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Chemistry and Secondary Science Education (Chemistry) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's
degree program.

## Chemistry Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Chemistry and Secondary Science Education (Chemistry) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

Earth Science Secondary
Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in Earth Science and Secondary Science Education (Earth Science) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Earth Science Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Earth Science and Secondary Science Education (Earth

Science) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Economics Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Economics and Secondary (Social Studies)
Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Economics Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Economics and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the

College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## English and Textual Studies

 Secondary Teacher Preparation, BA/MSCombined Bachelor's/Master's Degrees in English and Textual Studies and Secondary (English) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Geography Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Geography and Secondary (Social Studies)
Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education
master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## History Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in History and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## International Relations

Secondary Teacher Preparation, BA/MS
Combined Bachelor's/Master's Degrees in International Relations and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed
in order to articulate smoothly into the master's degree program.

## Latino-Latin American Studies Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in LatinoLatin American Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Mathematics Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Mathematics and Secondary Education (Math) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Mathematics Secondary Teacher

 Preparation, BS/MSCombined Bachelor's/Master's Degrees in Mathematics and Secondary Education (Math) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred th the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Physics Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Physics and Secondary Science Education (Physics) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Physics Secondary Teacher Preparation, BS/MS

Combined Bachelor's/Master's Degrees in Physics and Secondary Science Education (Physics) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Policy Studies Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Policy Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu

This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Political Science Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Political Science and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education
master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.
The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

Sociology Secondary Teacher Preparation, BA/MS<br>Combined Bachelor's/Master's Degrees in Sociology and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed in order to articulate smoothly into the master's degree program.

## Women's and Gender Studies Secondary Teacher Preparation, BA/MS

Combined Bachelor's/Master's Degrees in Women's and Gender Studies and Secondary (Social Studies) Teacher Preparation Program

## Contact

Marie Sarno, Teaching and Leadership Programs, 173 Huntington Hall mrsarno@syr.edu
This combined degree option, offered by the College of Arts and Sciences and the School of Education meets the academic requirements for the New York State teaching certification for the area of study. Both the Arts and Sciences undergraduate degree with a major related to the subject to be taught, and the School of Education master's degree are conferred at the same time, after all requirements are met - typically at the end of 5 years.

The School of Education encourages interested undergraduates to consult early for advice on what undergraduate courses should be completed
in order to articulate smoothly into the master's degree program.

## American Sign Language

## ASL 100 - Selected Topics

School of Education
1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ASL 101 - American Sign Language I

## School of Education

4 credit(s) Every semester
Introduction to American Sign Language (ASL) as a living, unique language underlying Deaf culture in the US. Vocabulary and grammar for basic conversations. For students with no or minimal signing skills.

## ASL 102 - American Sign Language II

## School of Education

4 credit(s) Every semester
Continuing development of skills developed in ASL I. Vocabulary, receptive and expressive skills to engage in spontaneous conversations and tell stories in ASL.
PREREQ: ASL 101

## ASL 201 - American Sign Language III

## School of Education

4 credit(s) Every semester
Building on ASL I and II students will develop ability to converse in ASL, tell stories and narratives, and think critically about Deaf culture and ASL in a variety of contexts.
PREREQ: ASL 102

## Cultural Foundations of Education

## CFE 300 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CFE 362 - Youth, Schooling and Popular Culture

## School of Education

3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 361, WGS 362
Double Numbered with: CFE 662
Positioned where school, media, and youth cultures intersect. How schools and media
represent "good" and "bad" youth, and how youth negotiate schools and popular cultures. Includes theories of popular culture and adolescence.
Additional work required of graduate students.

## CFE 400 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CFE 444 - Schooling \& Diversity

## School of Education

3 credit(s) Every semester
Crosslisted with: WGS 444
Construction of diversity (race, ethnicity, gender, nationality, class, disability, sexual orientation) in schools. Emergence of inequalities based on difference in pedagogy and curriculum. Student resistance in relation to cultural diversity. Teaching for empowerment.

## College Learning Strategies

## CLS 105 - College Learning Strategies

## School of Education

3 credit(s) Every semester
Study and application of learning strategies in the context of lectures, reading, recitations and independent learning situations.

## Counseling

## COU 101 - Developmental Issues of College Age Adults

## School of Education

3 credit(s) Every semester
Issues of college students such as time management, identity development, intimacy, sexuality, alcohol and drug use, conflict management, interpersonal communications, dealing with diversity, choosing a major and a career.

## COU 585 - General Counseling Methods

## School of Education

3 credit(s) At least 1x fall or spring
For non-majors, introduces students to fundamental components of the practice of counseling for application in a variety of professional settings. This course cannot be used to waive a required course for a master's program in Counseling and Human Services.

## Disability Studies

## DSP 200 - Selected Topics

## School of Education

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## DSP 203 - Introduction to Inclusive Schooling

## School of Education

3 credit(s) Every semester
Crosslisted with: EDU 203
Examining schools and teaching from a disability studies perspective. Topics, issues, values related to inclusive education. Readings, observations and analysis of cultural media.

## DSP 357 - Deafness and Disability

## School of Education

3 credit(s) Only during the summer
Double Numbered with: DSP 657
Examines the relationship between deaf and disability studies and explores deafness as both a social construction and an identity. Current and controversial issues in d/Deafness and disability. Additional work required of graduate students.

## DSP 400 - Selected Topics

## School of Education

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## DSP 419 - Health Promotion: Disability

## School of Education

3 credit(s) At least 1x fall or spring
Crosslisted with: HTW 419
Factors influencing the health \& well-being of persons with disability, including models of disability, disability history, law and services, health disparities, health promotion, ethics, violence, and disaster preparedness.

## DSP 424 - Representations of Ability \&

 Disability
## School of Education

3 credit(s) Irregularly
Crosslisted with: SOC 424
Representations of disability in autobiographical accounts and professional narratives, and implications of these representations for educational practice and policy.

## DSP 432 - Gender and Disability

## School of Education

3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 432, WGS 432
This course will investigate the intersection of gender and disability and how it impacts such issues as representation/self-representation, art and poetry, illness, education, sexuality, reproduction and motherhood, and caring work.

## DSP 438 - Disability and Popular Culture

## School of Education

3 credit(s) At least $1 x$ fall or spring Crosslisted with: SOC 438
Explore representations of disability through the analysis of books, movies, television, cartoons, and journalism. It will examine how disability is portrayed by people with and without disabilities, and discuss influences on public perceptions of disability.

## DSP 440 - Sociology of Disability

## School of Education

3 credit(s) At least 1x fall or spring Crosslisted with: SOC 440
A theoretical understanding of disability through the lens of sociology and that of disability studies and demonstrates how cultural institutions shape conceptions of disability in society.

## DSP 475 - Internship in Disability Policy

## School of Education

3 credit(s) Upon sufficient interest Practical experience in examining how public policy affects the lives of people with disabilities. Open to students admitted to the Disability
Studies minor who have completed at least two Disability Studies courses.

## DSP 490 - Independent Study

School of Education
1-6 credit(s)
Repeatable

## DSP 500 - Selected Topics

## School of Education

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## Dance Technique Studies

## DTS 228 - Basic Social Ballroom Dance

## School of Education

1 credit(s) Every semester
Basic skills of social dance, including the fox-trot, cha-cha, waltz, swing, rumba, polka, and novelty dances. Also introduction tango, merengue, and samba. Enroll as an individual or with partner. No experience necessary.

## DTS 229 - Intermediate Social Ballroom Dance <br> School of Education

1-2 credit(s) Every semester Ideal for anyone with previous ballroom dance experience or in any form of dance. Emphasis on styling and upper level dance patterns.

## DTS 231 - Introduction to Dance

## School of Education

1 credit(s) At least 1x fall or spring
Fundamental skills involved in jazz, modern, ballet, and aerobic dance.

## DTS 233 - African Dance

## School of Education

1 credit(s) At least 1x fall or spring Dance styles and rhythms from Africa and the Caribbean. Emphasizes folkloric dance of these regions. No dance experience necessary.

## DTS 234 - Tap I

## School of Education

1 credit(s) Every semester
An introduction to the history and practice of tap dance with an emphasis on styles, musicality, and technique.

## DTS 235 - Beginning Jazz I

## School of Education

1-2 credit(s) At least $1 x$ fall or spring Basic vocabulary of jazz dance. Emphasizes strength, technique, coordination, musicality, and appreciation of the art form. No dance experience necessary.

## DTS 236 - Beginning Jazz II

## School of Education

1-2 credit(s) At least $1 x$ fall or spring
Continuation of DTS 235. Emphasizes technical development, musicality, and longer combinations.

## DTS 237 - Intermediate Jazz I

## School of Education

1-2 credit(s) At least 1 x fall or spring
For students with training in jaz. Emphasizes
mastering techniques and developing personal style.

## DTS 238 - Intermediate Jazz II

## School of Education

1-2 credit(s) At least $1 x$ fall or spring
Continuation of DTS 237. Challenging warm-ups, combinations, and repertory.

## DTS 239 - Beginning Ballet I

## School of Education

$1-2$ credit(s) At least $1 x$ fall or spring Develops basic understanding of ballet. Develops skills in alignment, technique, and movement. No dance experience necessary.

## DTS 241 - Beginning Ballet II

## School of Education

1-2 credit(s) At least $1 x$ fall or spring Continuation of DTS 239. Further development of technical phrases, positions, center work, and ballet vocabulary.

## DTS 242 - Intermediate Ballet I

## School of Education

1-2 credit(s) At least 1x fall or spring For students with previous ballet training. Challenging center work, introduction of developed technical phrases, and repertory.

## DTS 243 - Intermediate Ballet II

## School of Education

1-2 credit(s) At least 1x fall or spring Continuation of DTS 242. Emphasizes developing complexity in precision, strength, alignment, and performance skills.

## DTS 244 - Beginning Modern I

## School of Education

1-2 credit(s) At least 1x fall or spring Introduces basic vocabulary including correct placement, technique and quality of movement.

## DTS 245 - Beginning Modern II

## School of Education

1-2 credit(s) Irregularly
Continuation of DTS 244. Emphasizes technical development and proper alignment.

## DTS 246 - Intermediate Modern I

## School of Education

1-2 credit(s) At least $1 x$ fall or spring For students with previous training in modern dance. Emphasizes technique or style developed by Graham, Horton, Humphrey, or Limon.

## DTS 247 - Intermediate Modern II

## School of Education

1-2 credit(s) Irregularly
Continuation of DTS 246. Students continue to master and refine technique, lengthy combination skills, and repertory.

## DTS 248 - Improvisation

## School of Education

1 credit(s) Irregularly
Basic improvisation for use in choreography and improvisational settings. Develops spontaneity of movement.

## DTS 249 - Latin \& Salsa Dance

## School of Education

1 credit(s) Every semester
Introduction to Latin American dancing including
Salsa, Merengue, Bachata, Samba. Develop dance skills for use in social settings and gain appreciation of artistic, athletic, and cultural qualities of dance. Covers partnering, style, rhythm, and music.

## DTS 251 - Hip Hop Dance

## School of Education

1 credit(s) Every semester
This course introduces students to origins and techniques that constitute Hip Hop dance. Students will learn about Hip Hop dance as a part of hip hop culture that can contribute to personal and societal awareness.

## DTS 252 - East Coast Swing

## School of Education

1 credit(s) Every semester
This course is for those who have no dance experience and those who have done other styles of dance. East coast swing and Lindy hop will be introduced in their historic and musical context.

## DTS 253 - West Coast Swing

## School of Education

1 credit(s) Every semester
This course is for those who have no dance experience and those who have done other styles of dance. West Coast Swing fundamentals, technique and musicality will be emphasized as well as current musical trends.

## DTS 254 - Bellydance

## School of Education

1 credit(s) Every semester
Students will learn the fundamental movements of Belly Dance. Introduction to isolations, figure eights, undulations, shimmies, footwork, dance steps and improvisation. Body awareness and tempo will be studied in conjunction with eight Middle Eastern rhythms.

## DTS 255 - Tap II

## School of Education

1 credit(s) At least 1 x fall or spring
Further development of tap dance knowledge, technique, and artistry
PREREQ: DTS 234

## DTS 280 - International Course

## School of Education

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## DTS 300 - Selected Topics

## School of Education

1-6 credit(s) At least $1 x$ fall or spring Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## DTS 368 - History and Appreciation of Western Dance

## School of Education

3 credit(s) Odd academic yr e.g. 2007-8 Histories of ballet, modern, tap and jazz dance, and their impact on dance as we know it today. Readings, discussion, viewing and demonstration. No dance experience necessary.

## DTS 423 - Basic Concepts of Choreography

## School of Education

3 credit(s) Even Academic Yr e.g. 2004-5
Exploration and definition of the shape and content of dance. Improvisation, motivation, style, purpose, and precise movement. Factors contributing to performance and choreography. Prior completion of at least three DTS technique classes.

## DTS 490 - Independent Study

## School of Education

1-6 credit(s)
Repeatable

## Education (General)

## EDU 101 - First Year Forum

## School of Education

1 credit(s) At least $1 x$ fall or spring An introduction to the School of Education and Syracuse University. Designed to assist student with a successful transition to college.

## EDU 200 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester. * Repeatable

## EDU 201 - Practicum in Pre-K Inclusive Education

## School of Education

1 credit(s) Every semester
Observation and engagement with children in preschool settings serving nondisabled children and children with Autism Spectrum Disorder and/ or other developmental disabilities. Provides opportunities to observe practices discussed in EDU 203 classes and readings. COREQ: EDU 203

## EDU 203 - Introduction to Inclusive Schooling

## School of Education

3 credit(s) Every semester
Crosslisted with: DSP 203
Examining schools and teaching from a disability studies perspective. Topics, issues, values related to inclusive education. Readings, observations and analysis of cultural media.

## EDU 204 - Principles of Learning in Inclusive Classrooms

## School of Education

3-4 credit(s) Every semester Understanding learning, learner similarities and differences in diverse populations; schools and classrooms as complex learning settings; teacher decision-making based on classroom observations, student assessment, theory, and situation analysis. No more than one of EDU 204,303 , or 307 may be taken for credit.

## EDU 221 - Education for Transformation

## School of Education

3 credit(s) At least 1x fall or spring
Exploration of education related professional fields. Critical examination of issues of power and privilege in U.S. Strategies for working toward social and cultural transformation.

## EDU 270 - Experience Credit

## School of Education

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## EDU 290 - Independent Study

## School of Education

1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan
submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## EDU 300 - Selected Topics

## School of Education

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EDU 301 - Methods and Practice in Teaching Art

## School of Education

4 credit(s) Every semester
Double Numbered with: EDU 601
Immersion in arts instructional responsibilities. Focus on developing emergent approaches to K-12 arts pedagogy. Initiates development of meaningful instructional repertoires and practices; teacher-learner dialogue techniques; classroom management strategies. Includes teaching Saturday art workshops. Additional worked required of graduate students.
PREREQ: AED 317 AND EDU 204

## EDU 302 - Methods and Curriculum in Teaching Art

## School of Education

4 credit(s) Every semester
Double Numbered with: EDU 602
Focuses on creating visual culture and culturally responsive curriculum and assessment units for first-year professional practice; interdisciplinary perspectives; values, ethics, and policy approaches for de-emphasizing prevailing "school art" paradigms. Includes teaching Saturday art workshops.
PREREQ: EDU 301

## EDU 303 - Teaching and Learning for Inclusive Schooling

## School of Education

3 credit(s) At least 1x fall or spring Principles of instruction for inclusive schooling based upon theory and research in children's learning. Emphasizing education for diverse student needs in elementary schools. Includes field placement. May not receive credit for both EDU 303 and EDU 204.

## EDU 304 - Study of Teaching

## School of Education

3-4 credit(s) Every semester
Teaching in secondary schools and in special subject areas. Observing and analyzing teacher and student behavior, exploring what others expect of teachers and they of each other.

Minimum 25-hour field placement. No more than one of EDU 304, EDU 605 , EDU 606 or EED 606 may be taken for credit.
PREREQ: EDU 204

## EDU 310 - The American School

## School of Education

3 credit(s) Every semester
Double Numbered with: EDU 610
Issues that impinge on teachers, teaching, and schools in today's society. May not be repeated for credit.

## EDU 321 - International Education for Transformation

## School of Education

3 credit(s) At least 1x fall or spring
Double Numbered with: EDU 622
Theories of international development applied to international education. How nationalism, race, gender, culture, and class shape educational opportunity. Cultural and social transformation strategies. Additional work for graduate students.

## EDU 355 - Fundamentals of Teaching for Non-Majors

## School of Education

3 credit(s) At least 1x fall or spring
Strategies for building community; implementing interactive, culturally-relevant instruction; planning using multiple intelligences; and teaching prosocial skills to youth in classroom and community environments. In-class practice of strategies.
Course does not apply to teacher certification programs.

## EDU 366 - Safe and Healthy Learning Environments

## School of Education

1 credit(s) Every semester Child abuse identification; abduction, school violence, substance abuse, and fire prevention; Dignity for All Students Act (DASA) training; general safety; as it relates to all students, preK12. Required for NY State school certification programs.

## EDU 400 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EDU 421 - Behavior Techniques in Music Education

## School of Education

3 credit(s) At least 1x fall or spring
Double Numbered with: EDU 621

Behavior techniques in classroom and rehearsal situations. Development of music task-analysis skills and reinforcement techniques. Learning goals in music for children of different ages and abilities.

## EDU 431 - Art in the Classroom

## School of Education

1 credit(s) Every semester
Workshop experience with art as it relates to the various academic areas and other arts. For education majors without an art background. Promotes effective working relationship between classroom teacher and arts specialists.

## EDU 432 - Music in the Classroom

## School of Education

1 credit(s) Every semester
Introduction for non-music majors to skills/ resources necessary to teach music to children. Assists the classroom teacher in the use of music and the music specialist in school setting.

## EDU 433 - Speech and Drama in the Classroom

## School of Education

1 credit(s) Every semester
Introduction to rhetorical and dramatic skills. Basic principles, critical and creative processes, and adaptive action. Students experience positions of reporter interpreter, advocate actor, and discussant oral reader.

## EDU 434 - Creative Movement for the Classroom

## School of Education

1 credit(s) Every semester
Use of movement exploration as integral to the learning process; implementation of movement elements into curriculum; appreciation for and understanding of the child's basic need to move and to learn through movement is stressed.

## EDU 470 - Experience Credit

## School of Education

## 1-6 credit(s)

Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## EDU 490 - Independent Study

## School of Education

1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent
of supervising instructor or instructors and the department.
Repeatable

## EDU 499 - Honors Capstone Project

## School of Education

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## EDU 500 - Selected Topics

## School of Education

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EDU 508 - Student Teaching

## School of Education

2-15 credit(s) Every semester Supervised teaching experience in prekindergarten through twelfth grade settings, with required seminars and conferences. Matriculated teacher preparation students only. Repeated as program requires. Variable length experiences earn $V$-grade until complete, leading to $P$ or $F$ grade. Prerequisites and credits vary by program. Offerings may vary each semester.
Repeatable

## EDU 522-Social Studies and Democracy: The Reconstruction of Education

## School of Education

3 credit(s) At least 1 x fall or spring
Relationship of social studies education to US democracy. Forces shaping our thinking about and understanding of history, politics, social issues, etc. Civic education's role in creating an active citizenry. Critical social theory around social studies related issues; current issues in the field of social studies.

## EDU 535- Quality Infant Care Giving

## School of Education

2-3 credit(s) Only during the summer Crosslisted with: CFS 535
Workshop. Research theories and demonstrations of infant/toddler care, development, and assessment; group care, legal and budgeting issues, and work with parents.

## Elementary Education

EED 270 - Experience Credit
School of Education
1-6 credit(s)
Repeatable

## EED 290 - Independent Study

## School of Education

1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## EED 300 - Selected Topics: Elementary Education

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EED 314 - Teaching Strategies for Inclusive Education

## School of Education

3 credit(s) Every semester
Creating cooperative, inclusive classroom communities with a focus on community building, classroom climate, interactive large and small group teaching strategies and positive responses to classroom and family diversity. Implementation during field experience. Effective spring 2009

## EED 323 - Primary Grade Mathematics Methods and Curriculum

## School of Education

3 credit(s) Every semester
Integration of theory, research, and practice in teaching and learning of mathematics in grades 1-3. Examination of programs' scope, sequence, and materials. Designing, teaching and assessing inclusive lessons and units, including differentiated instruction and adaptations. Admission to block II is required.
COREQ: EED 328 AND EED 336 AND EED 362 AND SPE 324

## EED 325 - Primary Grade Literacy Methods and Curriculum

## School of Education

3 credit(s) Every semester
Methods and curriculum for literacy instruction in grades 1-3, including reading, writing, speaking, and listening. Lesson planning for children with diverse needs and disabilities. Effective spring 2009
COREQ: EED 361

## EED 328 - Block II Field Experience

## School of Education

3 credit(s) Every semester
Six week, 4.5 days per week classroom experience
in grades 1-3. Student must be admitted to Block II.

COREQ: EED 323 AND EED 336 AND EED 362 AND SPE 324

## EED 361 - Block I Field Experience and Seminar

## School of Education

3 credit(s) Every semester
Seminar for students to critically reflect upon their field experiences. Professionalism, collaborative problem solving (including classroom management), and understanding and positively contributing to the school community.
Six week, 2.5 hours per day classroom experience (grades 1-3). Must have been admitted to first professional block.
COREQ: EED 325

## EED 362 - Block II Field Seminar

## School of Education

1 credit(s) Every semester
Opportunities for students to critically reflect upon and understand their field experiences. Emphasis on professionalism, collaborative problem solving (including classroom management) and becoming a productive school change agent.. Student must be admitted to Block II.
COREQ: EED 323 AND EED 328 AND EED 336
AND SPE 324

## EED 363 - Block III Field Seminar

## School of Education

1 credit(s) Every semester
Opportunities for students to critically reflect upon and understand their field experiences. Emphasis on professionalism, collaborative problem solving (including classroom management) and becoming a productive school change agent. Admission to Block III is required.
COREQ: EED 337 AND EED 438 AND EED 423 AND EED 425

## EED 400 - Selected Topics

## School of Education

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EED 423 - Intermediate Grade

 Mathematics Methods and Curriculum
## School of Education

3 credit(s) Every semester
Integration of theory, research, and practice in teaching and learning of mathematics in grades 4-6. Examination of programs' scope, sequence, and materials. Designing, teaching and assessing inclusive lessons and units, including
differentiated instruction and adaptations.
Admission to Block II is required.
PREREQ: EED 323
COREQ: EED 337 AND EED 363 AND EED 425 AND EED 438

EED 425 - Intermediate Grade Literacy Methods and Curriculum

## School of Education

3 credit(s) Every semester
Methods and curriculum for literacy instruction in grades 4-6, including reading, writing, speaking, and listening. Lesson and unit planning for children with diverse needs and disabilities. Student must be admitted to Block III. PREREQ: EED 325
COREQ: EED 337 AND EED 363 AND EED 423 AND EED 438

## EED 432 - Teaching Number Ideas, K-6

School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: MTD 432
Double Numbered with: EED 632
Numeration, operations, number theory, and rational number concepts and processes as foundational components of the elementary mathematics curriculum. Development of instructional methods and curriculum. Research on learning and teaching mathematics. Additional work required of graduate students.

## EED 433 - Teaching Geometry and Measurement, K-6

## School of Education

3 credit(s) Upon sufficient interest
Crosslisted with: MTD 433
Double Numbered with: EED 633
Geometry and measurement concepts and processes as foundational components of the elementary mathematics curriculum. Development of instructional methods and curriculum. Additional work required of graduate students.

## EED 438 - Block III Field Experience

## School of Education

3 credit(s) Every semester
Six week, 4.5 days per week classroom experience in grades 4-6.
COREQ: EED 423 AND EED 425 AND EED 337 AND EED 363

## EED 464 - Student Teaching Seminar/ Inclusive Education

## School of Education

3 credit(s) Every semester
Opportunities for student teachers in the Inclusive Elementary and Early Childhood Programs to critically reflect upon and understand their field experience. Emphasis on professionalism,
collaborative problem solving (including classroom management) and becoming a productive school change agent. COREQ: EDU 508

## EED 470 - Experience Credit

## School of Education

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## English Language Learners

## ELL 301 - Tutoring English Learners in Schools within the US and Abroad

## School of Education

3 credit(s) Irregularly
Tutoring techniques for assisting English learners in schools, in the U.S. and abroad. Increasing students' understanding of other cultures and their cultural assumptions of non-English speakers. Does not apply to NY teacher certification for PreK-12 schools.

## ELL 400 - Selected Topics

## School of Education

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## Health and Physical Education

## HEA 332 - Personal Health and Safety

## School of Education

3 credit(s) Every semester
Contemporary health issues including human sexuality, stress management, substance abuse, exercise, and nutrition.

## HEA 335 - First Aid

## School of Education

1 credit(s) Every semester
Standard first aid instruction leading to certification.

## HEA 336 - Cardiopulmonary Rescue

## School of Education

1 credit(s) Every semester
Basic life support for cardiac arrest victims: skill training in artificial compression of the heart, artificial ventilation of the lungs.

## HEA 338 - Advanced First Aid and CPR/AED

## School of Education

2 credit(s) Every semester
Basic life support for breathing and cardiac emergencies; controlling bleeding and managing shock; behavioral emergencies, pregnancy and childbirth, oxygen administration, suction and remote location first aid and first aid skills

## HEA 445 - Methods of Teaching Health

## School of Education

3 credit(s) At least 1x fall or spring
The 'How' and 'What' to teach in health education. School health content, state and national curricula and standards, teaching resources, technology and pedagogy. A 25-hour field placement accompanies this course.

## HEA 470 - Experience Credit

## School of Education

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## HEA 485 - Worksite Health Promotion

## School of Education

3 credit(s) Every semester
Double Numbered with: HEA 685
Principles and applications of health promotion in the workplace.

# Instructional Design, Development, and Evaluation 

## IDE 201 - Integrating Technology into Instruction I

## School of Education

1 credit(s) Every semester The first course of the three-course series intended to help preservice teachers integrate technology into instruction and teaching. The course introduces basic technologies with an emphasis on connecting technology experience with instruction through hands-on activities.

## IDE 301 - Integrating Technology into Instruction II

## School of Education

1 credit(s) Every semester
Second course of three-course series intended to help preservice teachers integrate technology into instruction and teaching. The course introduces emerging technologies to enhance preservice teachers' understanding of technology integration while using technology in field teaching.

PREREQ: IDE 201

## IDE 400 - Selected Topics: Instructional Design, Development \& Evaluation

## School of Education

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## IDE 401 - Integrating Technology into Instruction III

## School of Education

1 credit(s) Every semester
Third course of three-course series intended to help preservice teachers integrate technology into instruction and teaching. Course introduces emerging technologies to enhance preservice teachers' understanding of technology integration while using technology in field teaching. PREREQ: IDE 301

## IDE 456 - Computers as Critical Thinking Tools

## School of Education

3 credit(s) Only during the summer Double Numbered with: IDE 656 Integrating computer technology applications into instruction to promote critical thinking in learners. Multiple software tools are explored and instructional applications developed. Additional work required of graduate students.

## IDE 457 - Design of Online Courses

## School of Education

3 credit(s) At least $1 x$ fall or spring Double Numbered with: IDE 756
Explore, design, and critique online instruction; study online instructor and learner competencies; create guidelines for interactivity and resources uses in online courses; experience asynchronous and synchronous, individual and collaborative online activities. Additional work required of graduate students.

## IDE 552 - Digital Media Production

## School of Education

3 credit(s) At least 1x fall or spring Use of new media tools to develop digital instructional media. Includes introduction and instruction on contemporary and emerging media development tools, including graphics, video editing, web design, and mobile technology.

## Mathematics Education

MTD 330 - Undergraduate Research in Mathematics Education

## School of Education

1-3 credit(s) Upon sufficient interest Undergraduate students work with faculty members in mathematics education on research related to the learning and teaching of mathematics. Formulating questions, designing research, collecting and analyzing data. Repeatable

## MTD 432 - Teaching Number Ideas, K-6

## School of Education

3 credit(s) Upon sufficient interest Crosslisted with: EED 432
Double Numbered with: MTD 632
Numeration, operations, number theory, and rational number concepts and processes as foundational components of the elementary mathematics curriculum. Development of instructional methods and curriculum. Research on learning and teaching mathematics. Additional work required of graduate students.

## MTD 433 - Teaching Geometry and Measurement, K-6

## School of Education

3 credit(s) Upon sufficient interest Crosslisted with: EED 433
Double Numbered with: MTD 633
Geometry and measurement concepts and processes as foundational components of the elementary mathematics curriculum. Development of instructional methods and curriculum. Additional work required of graduate students.

## MTD 434 - Teaching and Learning Functions

School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: SED 434
Double Numbered with: MTD 634
Functions as an organizing theme for mathematics education, 5-14. Theoretical development of the function concept and multiple representations. Applications throughout algebra with applications to geometry and probability. Use of software and data collection equipment. Additional work required of graduate students.

## MTD 437 - Teaching and Learning Geometry

## School of Education

3 credit(s) Irregularly
Crosslisted with: SED 437
Double Numbered with: MTD 637
Geometric thinking as an organizing theme
for mathematics education, 5-14. Theoretical
development of geometric concepts and notion of proof. Applications and connections of geometry throughout the curriculum. Use of geometry software. Additional work required of graduate students.

## MTD 438 - Teaching and Learning Statistics

## School of Education

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: MTD 638
Statistical thinking across the curriculum, 5-14. Theoretical development on student learning of variation, sampling and inference. Research-based strategies for teaching. Use of statistical software and related technologies. Additional work required of graduate students.

## Physical Education

## PED 200 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PED 201 - Beginning Yoga

## School of Education

1 credit(s) At least $1 x$ fall or spring Knowledge and skill application of beginning Iyengar Yoga. Introduction to postures, breathing techniques, and simple meditation. Body awareness, incorporating strength, flexibility, and balance.

## PED 203 - Tai Chi I

## School of Education

1 credit(s) At least $1 x$ fall or spring
An introduction to the art and science of Tai Chi including movement principles, basic concepts and techniques of internal training, and the health benefits of these techniques from an exercise science perspective.

## PED 204 - Pilates

## School of Education

1 credit(s) At least $1 x$ fall or spring Knowledge and skill application of Pilates. Focus on increase core strength, stability and flexibility, improved functional fitness, posture, balance, and enhanced performance in many sports-based activities.

## PED 209 - Adventure Activities I

## School of Education

1 credit(s) At least $1 x$ fall or spring Adventure activities including: group games, initiatives and ropes course elements. Principles
of trust, communication, cooperation, respect, and responsibility

## PED 211 - Beginning Swimming

## School of Education

1 credit(s) Every semester
For individuals with essentially no ability in and around the water. Develops basic swimming and survival skills at the individual's own pace.

## PED 212 - Intermediate Swimming

## School of Education

1 credit(s) Every semester
For individuals who already possess the ability to swim and have minimal fear of the water. Safety skills and stroke development.

## PED 213 - Advanced Swimming

School of Education
1 credit(s) Every semester
Advanced techniques for stroke improvement and training. High-yardage workouts.

## PED 214 - Snorkeling

## School of Education

1 credit(s) Every semester
Introduction to the underwater world. Use of mask, snorkel, and fins; other snorkeling skills. Individuals who take this class should be able to swim at an intermediate level. Course fee.

## PED 216 - Water Safety Instruction

## School of Education

2 credit(s) At least $1 x$ fall or spring
Theory and practice of teaching beginning, intermediate, and advanced swimming and diving. A specific section activity may not be repeated for credit. Red Cross certification available.

## PED 217 - Lifeguarding

## School of Education

2 credit(s) At least 1x fall or spring
Designed to train individuals in all areas
necessary to be considered a knowledgeable and capable lifeguard. Red Cross certification available.

## PED 221 - Scuba

## School of Education

1 credit(s) Every semester
Basic skills and knowledge, from use of equipment to the physiology of diving. Participants must be able to swim at an intermediate level. Certification available. Scuba fee.

## PED 223 - Underwater Photography

## School of Education

1 credit(s) Every semester
Introduces certified scuba divers to the skills and
techniques of underwater photography. Course fee. PREREQ: PED 221

## PED 225 - Advanced Scuba

## School of Education

1 credit(s) Every semester
For basic open-water scuba divers. Develops knowledge, mental attitude, and physical skills. Scuba fee.
PREREQ: PED 221

## PED 226 - Bootcamp Fitness

## School of Education

1 credit(s) Every semester
Boot camp is a challenging work out for your entire body increasing strength, muscle endurance, balance, and flexibility. It is a combination of cardio and strength training using only your body.

## PED 228 - Boxing Fitness

## School of Education

1 credit(s) Every semester
To develop or enhance physical, mental and spiritual well-being through cardiovascular, strength and flexibility training using boxing techniques - punches, ducks, and slips.

## PED 229 - Cardio Kick Boxing

## School of Education

1 credit(s) Every semester
CardioKickboxing is a total body fusion class that will up kick your cardio fitness to the next level while strengthening, defining and shaping your body! Suitable for all ages and fitness levels.

## PED 230 - Core Training

## School of Education

1 credit(s) Every semester
Knowledge and skill application of core strength. Introduction to all muscles within the core.

## PED 240 - Individual/Dual Sports

## School of Education

1 credit(s) At least 1x fall or spring
This course covers most individual/dual sports. Emphasis is on how to teach them. Physical Education majors only. May not be repeated for credit.

## PED 249 - Body Works

## School of Education

1 credit(s) Irregularly
Exercises designed for the general population that stretch, strengthen, and condition the body.
Provides information on minimizing injury.

## PED 250 - Team Sports

## School of Education

1 credit(s) At least 1x fall or spring
Sections develop skill and knowledge in basketball, field hockey, soccer, softball, volleyball, etc.

PED 258 - Rugby

## School of Education

1 credit(s) At least 1 x fall or spring
Develops skills and tactics, including ball possession, field position, kicking, and passing.

## PED 259 - Varsity Athletics

## School of Education

0-1 credit(s) Every semester
Varsity team members only. Sanctioned fall, winter, and spring intercollegiate sports. Repeatable 7 time(s), 4 credits maximum

## PED 261 - Golf

## School of Education

1 credit(s) Every semester
Basic skills, rules, strategies, terminology, equipment, and safety practices. Range practice, course play, lectures, and videotaping.

## PED 262-Gymnastics

## School of Education

1 credit(s) Every semester
Basic skills and understanding. Includes use of apparatus, tumbling, and basic movement skills.

## PED 263 - Self Defense for Women

## School of Education

1 credit(s) Every semester Identifying factors that increase the risk of being assaulted, including physical surroundings, demeanor, clothes, etc. Strategies for reducing those risks discussed and practiced. Means of dealing with different levels of intensity of assaults without escalating violence. Physical defense techniques.

## PED 264 - Beginning Karate

## School of Education

1 credit(s) Every semester
Fundamentals, including flexibility and strength training, self-discipline, and confidence through practical applications. For men and women. No experience required.

## PED 265 - Intermediate Karate

## School of Education

1 credit(s) Every semester
Advanced instruction. Sparring and other upperlevel material.
PREREQ: PED 264

## PED 266 - Advanced Karate

## School of Education

1 credit(s) At least 1x fall or spring
Upper-level training in martial arts.
PREREQ: PED 265

## PED 275 - Beginning Tennis

## School of Education

1 credit(s) Every semester
Basic skills, techniques, and knowledge.

## PED 276 - Intermediate Tennis

School of Education
1 credit(s) Every semester
Improves previously developed individual and team skills and strategies.

## PED 277 - Advanced Tennis

## School of Education

1 credit(s) Every semester
Game strategies and advanced skill development for those who wish to participate in high-level competition.

## PED 278 - Beginning Fencing

## School of Education

1 credit(s) Every semester
Develops basic skills and knowledge.

## PED 280 - International Course

## School of Education

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## PED 281 - Downhill Skiing

## School of Education

1 credit(s) At least 1x fall or spring
Develops basic skills and knowledge appropriate to student's level of ability. A section on instructing skiing is available.

PED 282 - Beginning Cross Country Skiing

## School of Education

1 credit(s) Irregularly
Basic skills and knowledge.

## PED 286 - Beginning Horseback Riding

## School of Education

1 credit(s) Every semester
Emphasizes dressage and the classical seat
used in international competition. Develops horsemanship: saddling, bridling, grooming, riding position, and communications. Course fee.

## PED 287 - Intermediate Horseback Riding

## School of Education

1 credit(s) Every semester
Further development of skills: balance, contact with the horse's mouth, teaching the horse to bend and keep rhythm, and smoother transitions. Course fee.

## PED 288 - Advanced Horseback Riding

## School of Education

1 credit(s) Every semester
Promotes increased sensitivity between horse and rider. High-level horses are available for riders with appropriate skills. Course fee.

## PED 289 - Backpacking

## School of Education

1 credit(s) Every semester
Course study and practical field experience. Develops skills and knowledge to enhance enjoyment of the outdoors. No previous outdoor camping/hiking experience needed. Course fee.

## PED 291 - Individualized Fitness

## School of Education

1 credit(s) Every semester
Gives students the knowledge and ability to "get in shape." Developing exercise programs and performing fitness-related activities. Good preparation for all other fitness-related courses.

## PED 292 - Low Impact Aerobics

## School of Education

1 credit(s) Every semester
Develops total fitness of the body through cardiovascular training, muscle toning, strengthening, and stretching. Low to relatively high intensity level, with impact remaining low (one foot always on the ground).

## PED 293 - High Impact Aerobics

## School of Education

1 credit(s) Every semester
Develops total fitness of the body through cardiovascular training, muscle toning, strengthening, and stretching. High intensity level, incorporating a lot of jogging and jumping movements.

## PED 294 - Aerobic Dance

## School of Education

1 credit(s) Every semester
Develops total fitness of the body through cardiovascular training, muscle toning, strengthening, and stretching. Moderate intensity
level. Incorporates both dance and fitness-related movements.

## PED 295 - Weight Training

## School of Education

1 credit(s) Every semester
Entry-level course emphasizing techniques and training concepts related to strength and endurance. Students use Nautilus and/or Universal Single- or Multiple-Station equipment.

## PED 296 - Advanced Weight Training

## School of Education

1 credit(s) Upon sufficient interest Advanced course using weight training as conditioning, emphasizing free weights. PREREQ: PED 295

## PED 299 - Backpacking II

## School of Education

1 credit(s) At least $1 x$ fall or spring Designed for backpackers with some experience who wish to develop the skills necessary to plan their own adventure. Involves classroom study and field experience. Course Fee.
PREREQ: PED 289

## PED 301 - Intermediate Yoga

## School of Education

1 credit(s) Every semester Knowledge and skill application of intermediate Yoga. Introduction to postures, breathing techniques, and simple meditation. Body awareness, incorporating strength, flexibility, and balance.

## PED 303 - Tai Chi II

## School of Education

1 credit(s) At least 1x fall or spring A continuation of Tai Chi I, focuses on: the second slow set; the partner practice of doublehand push hands, and additional exercises for developing coordinated, whole-body strength PREREQ: PED 203

## PED 380 - International Course

## School of Education

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Professional Physical Education

## PPE 177 - Introduction to Health and Physical Education

## School of Education

3 credit(s) At least 1 x fall or spring Introduction to the historical, philosophical, and sociological perspectives of school health education and physical education. National data, reform, and standards; and best practices in teaching.

## PPE 200 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PPE 235 - Teaching K-12 HealthRelated Fitness

## School of Education

3 credit(s) At least $1 x$ fall or spring Basic skills and methods for teaching healthrelated fitness activities in the K-12 population.

## PPE 295 - Introduction to Exercise Science

## School of Education

3 credit(s) Every semester
Topics in exercise science including exercise physiology, mechanics of human motion, motor behavior, sports psychology.

## PPE 300 - Selected Topics

## School of Education

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PPE 325 - The Philosophy, Principles and Organization of Athletics in Education

## School of Education

3 credit(s) Every semester Philosophy and principles of athletics as integral parts of physical education and general education. Coach as an educational leader; public relations; general safety procedures; general principles of school budgets, records, purchasing and use of facilities.

## PPE 326 - Theory and Techniques of Coaching

## School of Education

2 credit(s) Every semester Basic concepts of all sports. History, rules, regulations, and policies of interscholastic athletics. Skills, technical information, management, training and conditioning, equipment, safety and officiating. Supervised coaching experience with a specific sport required.
PREREQ: PPE 325

## PPE 327 - Health Sciences Applied to Coaching

## School of Education

3 credit(s) Every semester
Principles of physiology and psychology related to coaching; risk minimization; health issues and administrative procedures. Fitness, conditioning, sport specific training, nutrition and weight management related to coaching.

## PPE 381 - Physical Education in the Elementary Schools

## School of Education

3 credit(s) At least 1x fall or spring Professional-preparation theory course for elementary physical education. Curriculum development, teaching methodology, perceptual motor programs, movement education, skill and knowledge assessment, and special elementary activities. Field application required.

## PPE 383 - Physical Education in the Secondary School

## School of Education

3 credit(s) At least 1x fall or spring Professional-preparation theory course for secondary physical education. Curriculum issues, teaching methodology, mainstreaming, cognitiveand psycho- motor-assessment techniques, management skills, and selected secondary physical-education programs. Peer teaching.

## PPE 385 - Motor Behavior Across the Lifespan

## School of Education

3 credit(s) Every semester
Psychological and physiological processes that affect motor performance. Motor control, motor learning and motor development across the lifespan.

## PPE 394 - Assessment and Curriculum in Health and Physical Education

## School of Education

3 credit(s) At least 1x fall or spring
Assessment as an integrated and seamless
component of curricular planning and student learning in a variety of physical education and health education contexts.
PREREQ: PPE 177 AND (PPE 381 OR PPE 383)

## PPE 395 - Structural Kinesiology

School of Education
3 credit(s) At least 1x fall or spring
The interrelationship of the physiological processes and anatomy of the human body with respect to movement and exercise.

## PPE 408 - Analysis of Human Motion

## School of Education

3 credit(s) Every semester
Structures and mechanical analysis of human movement as related to physical activity. Laboratory experience.
PREREQ: (BIO 216 AND BIO 217) OR PPE 395

## PPE 415 - Physical Education Teacher Development

## School of Education

1 credit(s) Every semester
Analysis of physical education teaching behavior and decision making, teaching alternatives and effectiveness. Class management, professional issues, personal teaching strengths. Issues related to student teaching, methods, curriculum and career planning.
COREQ: EDU 508

## PPE 435 - Introduction to Sports Psychology

## School of Education

3 credit(s) Every semester History, theories, and principles of sport behavior and personality; psychological skills and techniques for improving individual and team performance.

## PPE 470 - Experience Credit

## School of Education

1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## PPE 481 - Adapted Physical Education

## School of Education

3 credit(s) At least $1 x$ fall or spring Principles for developing strategies for programs to fulfill physical education and recreation needs and interests of individuals with physical, mental, or emotional disabilities. Field experience.

## PPE 483 - Scientific Principles of Conditioning

## School of Education

3-6 credit(s) At least 1 x fall or spring
Double Numbered with: PPE 683
Development of physical conditioning programs
based on scientific principles.
PREREQ: BIO 216 AND BIO 217

## PPE 486 - Prevention and Care of Athletic Injuries

## School of Education

3 credit(s) Every semester
Sports medicine: the prevention and care of athletic injuries. Equipment, nutrition, rehabilitation, first aid, follow-up care, taping, and use of protective padding.

## PPE 490 - Independent Study

## School of Education

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and department.
Repeatable

## PPE 497 - Physiology of Exercise

## School of Education

3 credit(s) Every semester
Principles of physiology as applied to exercise. Laboratory experiences.
PREREQ: BIO 216 AND BIO 217

## PPE 499 - Capstone Project

## School of Education

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## PPE 514 - Exercise and Aging

## School of Education

3 credit(s) At least 1 x fall or spring
The influence of aging on physical performance and the consequences of exercise on the physiological processes associated with aging. PREREQ: PPE 497

## PPE 515-Graded Exercise Testing and Interpretation

## School of Education

4 credit(s) Irregularly
The administration of standardized exercise tests for the evaluation of health and fitness status. Presentation of normal and abnormal physiological responses these tests. Lab includes administration of exercise tests and equipment

## use.

PREREQ: PPE 497

## PPE 516 - Exercise Prescription: Health and Disease

## School of Education

3 credit(s) Irregularly
Exercise prescription for health and fitness in the apparently healthy and a variety of clinical populations.
PREREQ: PPE 497

## PPE 517 - Pathophysiology

## School of Education

3 credit(s) At least 1x fall or spring
Physiology of disease processes emphasizing metabolic, cardiovascular, and neuromuscular pathophysiology. Suggested for students pursuing careers in clinical exercise physiology.
PREREQ: BIO 216 AND BIO 217 AND PPE 497

## PPE 518 - Cardiac Rehabilitation

## School of Education

3 credit(s) At least 1x fall or spring
Exercise training and prescription for individuals with cardiovascular disease.
PREREQ: PPE 497

## PPE 519 - Metabolic Aspects of Physical Activity

## School of Education

3 credit(s) At least 1x fall or spring Examines metabolic processes that influence or are affected by acute and chronic physical activity. Emphasis on metabolism and human physical performance.
PREREQ: PPE 497

## Reading and Language Arts

## RED 300 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## RED 315 - Adult Literacy Education: Principles and Practicum

## School of Education

3 credit(s) Irregularly
Methods of teaching adult literacy and discussion of broader, literacy-related social issues. Students tutor in local programs. Students must be able to schedule six hours each week for tutoring.

## RED 326 - Literacy Across the Curriculum

## School of Education

3-4 credit(s) Every semester Double Numbered with: RED 625 Language acquisition and literacy development for diverse learners. Instructional approaches, materials, and assessment techniques to foster reading, writing, speaking, and listening for thinking and communicating. Includes minimum 25 -hour field placement. Adolescence and special subject preparation programs. Additional work required of graduate students.

## RED 512 - Children's and Adolescent Literature

## School of Education

3 credit(s) At least 1x fall or spring This course will explore the history of, characteristics of, benefits of, and problems surrounding the genres of children's and adolescent literature. The course will familiarize students with a variety of texts written for children and young adults and give a historical and theoretical background for the teaching of literature.

## Science Education

## SCE 200 - Selected Topics: Science Education

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SCE 400 - Selected Topics

## School of Education

1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SCE 413 - Methods and Curriculum in Teaching Science

## School of Education

3 credit(s) At least 1x fall or spring
Double Numbered with: SCE 613
Planning lessons, developing broad units, planning curricula for science 7-12. Prereq: Admission to secondary candidacy semester.

## SCE 416 - Assessment \& Data-Driven Instruction

## School of Education

3 credit(s) At least 1x fall or spring

Crosslisted with: SED 416
Double Numbered with: SCE 616 Use of formal and informal assessments to assess and document growth for varying student populations, evaluate instructional effectiveness, and adjust curriculum and instruction. Classroom management to support accompanying student teaching placement. Additional work required of graduate students.

## Secondary Education

## SED 340 - Participation in the Professional Development School

## School of Education

0-1 credit(s) Every semester
Double Numbered with: SED 640
Individual involvement in research, discussion and decision making with teachers, university faculty, and colleagues who are members of the Professional Development School Cadres and Academies.
Repeatable 7 time(s), 8 credits maximum

## SED 413 - Methods and Curriculum in Teaching

## School of Education

3 credit(s) At least 1x fall or spring
Double Numbered with: SED 613
Lesson planning, developing broad units, planning curricula for specific grade levels and content areas under the guidance of major advisors in each teaching field.
COREQ: SPE 412

## SED 416 - Assessment \& Data-Driven Instruction

## School of Education

3 credit(s) At least 1x fall or spring Crosslisted with: SCE 416
Double Numbered with: SED 616
Use of formal and informal assessments to
assess and document growth for varying student populations, evaluate instructional effectiveness, and adjust curriculum and instruction. Classroom management to support accompanying student teaching placement. Additional work required of graduate students.
PREREQ: SED/SCE 413/613
COREQ: EDU 508

## SED 434 - Teaching and Learning Functions

## School of Education

3 credit(s) Even Academic Yr e.g. 2004-5 Crosslisted with: MTD 434
Double Numbered with: SED 634
Functions as an organizing theme for mathematics education, 5-14. Theoretical development of the function concept and multiple representations.

Applications throughout algebra with applications to geometry and probability. Use of software and data collection equipment. Additional work required of graduate students.

## SED 437 - Teaching and Learning Geometry

## School of Education

3 credit(s) Odd academic yr e.g. 2007-8 Crosslisted with: MTD 437
Double Numbered with: SED 637
Geometric thinking as an organizing theme for mathematics education, 5-14. Theoretical development of geometric concepts and notion of proof. Applications and connections of geometry throughout the curriculum. Use of geometry software. Additional work required of graduate students.

## Special Education

## SPE 311 - Perspectives on Disabilities

## School of Education

3 credit(s) Every semester
Overview of learner characteristics and service delivery models for students with disabilities; selected issues in child protection; problem solving processes for inclusive schools and communities. Weekly field experience getting to know a child with a disability.

## SPE 324 - Differentiation for Inclusive Education

## School of Education

3 credit(s) Every semester
Strategies to support and promote the learning of all students (including those with disabilities and challenging behavior). Differentiation, adaptation, active learning techniques, inclusive lesson and unit planning, assessment and collaborative teaching. Implementation during field experience. PREREQ: EED 314
COREQ: EED 323 AND EED 328 AND EED 336 AND EED 362

## SPE 412 - Adapting Instruction for Diverse Student Needs

## School of Education

3 credit(s) At least 1x fall or spring Double Numbered with: SPE 612
Methods and materials to ensure that diverse student needs are met in classrooms. Focus on individual differences in learning, behavior, physical abilities, and emotional characteristics. Other differences will also be considered (e.g., race, gender). Additional work required of graduate students. Admission to a teacher preparation program.

## SPE 434 - Collaborative Teaching for Inclusive Education

## School of Education

3 credit(s) Every semester
Inclusive instructional strategies for students with disabilities, with particular focus on students with autism. Collaborative teaching approaches, IEP implementation, positive behavior supports, fostering communication and adaptations to access enriching curricula. Implementation during field experience. Effective Fall 2010
PREREQ: SPE 324
COREQ: EDU 508

## SPE 500 - Selected Topics

## School of Education

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SPE 520 - Methods and Curricula in Early Childhood Special Education

## School of Education

3 credit(s) At least 1 x fall or spring Curricula, program design, and teaching methods for educating infants and young children with disabilities.

## School of Education Faculty

Kal Alston, Professor
Ph.D., University of Chicago, 1989
Philosophy in education, gender and race; popular culture
Barbara Applebaum, Professor, Chair
Ph.D., Ontario Institute for Studies in Education of the University of Toronto, 1994
Feminist ethics, feminist philosophy, and critical race theory
Christine Ashby, Assistant Professor
Ph.D. Syracuse University 2008
Inclusive education, disability studies, autism and communication.

Tiago Barreira, Assistant Professor
Ph.D., Middle Tennessee State University, 2010
Reliability and validity of human behavior (physical activity, sedentary behavior, and sleep), body composition, and cardiovascular disease risk factors

James Bellini, Professor
Ph.D., University of Arkansas, 1995
Rehabilitation research, disability policy,
rehabilitation evaluation
Sharif Bey, Assistant Associate Professor Ph.D. Pennsylvania State University 2007

Community based arts programing, AfricanAmerican art education history, unofficial Slovak art, post Ssoviet art education reforms, conceptual art and its implications to art education.
Douglas Biklen, Professor, Dean Emeritus Ph.D., Syracuse University, 1973 Child advocacy, public policy, facilitated communication, inclusive education

Benita Ann Blachman, Trustee Professor of Education and Psychology
Ph.D. University of Connecticut 1981 Learning and reading disabilities; prevention of reading difficulties; early reading intervention; early language factors that predict reading achievement.

Marlene Blumin, Professor
Ph.D., Cornell University, 1988
College readiness, cognitive strategies, technology and curriculum in undergraduate education, learning models in post-secondary settings

Rachel Brown, Associate Professor
Ph.D., University of Maryland, 1994
Reading, strategy, instruction, cognition, instructional technology

Tom Brutsaert, Associate Professor, Chair
Ph.D. Cornell University 1997
Human adaptation to high altitude, exercise at altitude, fetal programming and effects on muscle function and physical activity.

Diane Canino-Rispoli, Instructor
C.A.S. Syracuse University 1991 Educational Leadership
M.S. Reading Education Syracuse University
B.S. State University College at Buffalo

Elementary Education Research interests include linstructional leadership as it relates to supporting teacher effectiveness.

Julie Causton, Associate Professor
Ph.D., University of Wisconsin-Madison, 2003
Special education, differentiation, universal design for instruction, professional collaboration, paraprofessional support

Kelly Chandler-Olcott, Laura J. and L. Douglas Meredith Professor , Chair
Ed.D., University of Maine, 1998
Adolescent literacy, Content literacy, and English education

John Coggiola, Associate Professor
Ph.D., Florida State University, 1997
Music education
Luis Columna, Associate Professor
Ph.D., Texas Woman's University 2007
Adapted physical education, physical activity among families of children with disabilities, inclusive teacher preparation, diversity, multicultural education
Alanna Rochelle Dail, Assistant Professor
Ph.D., Vanderbilt University 2004

Reading and Language Arts
Elisa DeKaney, Associate Professor, Program Coordinator
Ph.D., Florida State University, 2001
Choral music, and conducting, Brazilian music, music and culture
Keith C. DeRuisseau, Associate Professor Ph.D., Florida State University, 2002 Skeletal muscle physiology, sarcopenia, disusemediated skeletal muscle atrophy
Helen M. Doerr, Laura J. and L. Douglas Meredith Professor
Ph.D., Cornell University, 1994
Secondary mathematics education, teacher and student learning, mathematical modeling, and mathematical communication.

Benjamin H. Dotger, Associate Professor
Ph.D., North Carolina State University, 2006 Teacher professional development, educational administration
Sharon Dotger, Associate Professor
Ph.D. North Carolina State University 2006 Science teaching and learning, lesson study, writing in science.
Jodi Dowthwaite, Research Assistant Professor Ph.D., Cambridge University, (Churchill College Cambridge, U.K.) 1997
Development of musculoskeletal strength and body composition across the lifespan, effect of exercise on skeletal growth and relative bone strength in girls, osteoporosis and fracture prevention
Jason Duffy, Assistant Professor
Ph.D. University of Rochester, 2013
Counselor Education and development, clinical mental health counseling.
Timothy K. Eatman, Assistant Professor
Ph.D., University of Illinois-Champaign, 2001
Educational equity; higher education; publicly engaged scholarship, faculty rewards; institutional planning and leadership; $\mathrm{P}-16$; institutional collaboration; diversity, STEM success

Catherine M. Engstrom, Associate Professor , Chair Ph.D., University of Maryland, 1991
Student personnel administration, counseling, and personnel services

Gail Ensher, Professor
Ed.D., Boston University, 1971
Early childhood education of special-needs students
Beth Ferri, Professor
Ph.D., University of Georgia, 1997
Disability studies, inclusive education, women with disabilities, feminist and critical pedagogies and methods, qualitative and participatory research methods, narrative inquiry

Alan Foley, Associate Professor, Interim Director, Center on Human Policy

Ph.D., University of Wisconsin, 2001
Curriculum and instruction, educational communications and technology
Marcelle Haddix, Dean's Assistant Professor Ph.D., Boston College, 2008
English education, critical literacy, racial and linguistic diversity in teacher education
Wendy S. Harbour, Lawrence B. Taishoff Assistant Professor
Ed.D. Harvard University 2008
Disability in $\mathrm{k}-12$ and higher education, disability studies, deaf studies, universal design.
Kevin Heffernan, Assistant Professor Ph.D., University of Illinois at Urbana-Champaign 2008
Effect of acute exercise and exercise training on vascular and autonomic function in health and disease
Juliet Hess, Assistant Professor
Ph.D. Ontario Institute for Studies in Education University of Toronto, 2013 Anti-oppression education, music education for social justice, ethics in world music study

Nicole R. Hill, Professor, Chair
Ph.D. Ohio University, 2002
Clinical mental health counseling; counselor education and supervision; counseling adolescents and children; mental health and wellness; professional development
Kathleen A. Hinchman, Professor, Interim Associate Dean
Ph.D., Syracuse University, 1985
Adolescent literacy and literacy teacher education
Dawn Johnson, Associate Professor, Chair Ph.D., University of Maryland 2007
Experiences of women of color in math, science, and engineering programs, the impact of social justice education courses on attitudes toward diversity
Tiffany Koszalka, Professor, Chair
Ph.D., Pennsylvania State University, 1999
Technology integration in K-12 science, math, geography; technology learning environments
Jing Lei, Associate Professor
Ph.D., Michigan State University, 2005
Learning, technology, culture
Gretchen Lopez, Assistant Professor
Ph.D., University of Michigan, 1993
Intergroup relations, multicultural education, social identities
Melissa Luke, Associate Professor
Ph.D. Syracuse University 2007
School Counseling program implementation and supervision, school-family-community partnerships to support college access for historically marginalized students.
Jeffery Mangram, Associate Professor
Ph.D., Syracuse University, 2006

Urban education and media literacy
Joanna 0. Masingila, Laura J. and L. Douglas Meredith Professor, Interim Dean Ph.D., Indiana University, Bloomington, 1992 Teaching and Leadership; Area Coordinator, Mathematics Education; Ethnomathematics,teacher education, multimedia case studies in teacher professional development; connecting mathematics practice in and out of school
Beth Myers, Research Assistant Professor Ed.D., University of Pennsylvania, 2012 Inclusive education; autism; critical disability studies; practitioner inquiry
Leonese Nelson, Research Assistant Professor Ph.D. Syracuse University 2004
American politics, public administration, and student development in the STEM field for grades K-6

Michael L. Norris, Assistant Professor
Ph.D. The Ohio State University, 2013
Health and physical education pedagogy, teacher preparation; adapted physical education, coaching and preschool physical activity
Suzanne Oliver, Assistant Professor
Ph.D. University of Illinois at Urbana-Champaign, 1994 \& M.F.A. University Of Illinois at UrbanaChampaign, 1986
Dance; kinesiology; Alexander technique; movement education

Mario Rios Perez, Assistant Professor Ph.D., University of Illinois, Champaign-Urbana, 2012
History of education, Latina/Latino history, urban education, race and immigration

Emily E. Robertson, Associate Professor
Ph.D., Syracuse University 1981
Philosophy of education, moral and social philosophy, philosophy of the social sciences
Dalia Rodriguez, Associate Professor
Ph.D., University of Illinois, Champaign-Urbana, 2005
Racial inequality, qualitative research methods, policy studies
James Haywood Rollin g Jr., Professor, Program Chair
Ph.D., Teacher's College, Columbia University, 2003
Studio arts as research practice, visual culture and identity politics, curriculum theory

Zaline M. Roy-Campbell, Associate Professor Ph.D. University of Wisconsin-Madison 1992 Unpacking multicultural literal effective instruction for disenfranchised students, dimensions of content literacy for English language learners.
Mara Sapon-Shevin, Professor
Ed.D., University of Rochester, 1976
Teaching for social justice, anti-racism, inclusive
education, cooperative learning, and teacher education
Derek X. Seward, Assistant Professor Ph.D., University of Rochester, 2009 Counselor education, the experiences of graduate students of color in diversity courses, multicultural training methods
Scott L. Shablak, Research Professor Ph.D, Syracuse University 1971
Program and training assessment and evaluation; organizational and professional development; grant design and development; leadership effectiveness; successful study and student motivational strategies
Joseph Shedd, Associate Professor Ph.D., New York State School of Industrial and Labor Relations, Cornell University, 1989 Collective bargaining, organizational behavior

## Corinne Roth Smith, Professor

Ph.D., Syracuse University, 1973
School psychological assessment and intervention practices, learning disabilities
Nick L. Smith, Professor
Ph.D., University of Illinois, 1975
Evaluation and applied field research methodology
George Theoharis, Associate Professor, Chair Ph.D., University of Wisconsin-Madison, 2004 School leadership, inclusive education, elementary social studies

John W Tillotson, Associate Professor Ph.D., University of lowa, 1996
Science teaching preparation, teacher beliefs
Kathleen Utter-King, Research Assistant Professor
Ph.D., University of Rochester 2007
Genetic epidemiology, evidence based practice in exercise and sports science

Linwood G. Vereen, Associate Professor
Ph.D. University of Nevada-Reno, 2000
Clinical mental health counseling; counselor education and supervision; counseling, group counseling, humor in counseling
Qiu Wang, Assistant Professor
Ph.D., Michigan State University 2010
Research methodology; educational
measurement; statistical modeling
Diane Wiener, Research Associate Professor Ph.D. University of Arizona, 2005
Critical disability theory; representations of identities in media; discourse analysis; learnercentered education

Julia M. White, Assistant Professor
Ph.D., Syracuse University, 2007
Inclusive education and students with complex support needs, Disability Studies in Education, special/education policy, Romani Studies
Louise C. Wilkinson, Distinguished Professor

## of Education, Psychology and Communication

Sciences
Ed.D., Harvard University, 1974
Language and literacy learning, teacher education, education policy, qualitative assessment

Marion Wilson, Associate Professor
M.A. Columbia University 1990 \& M.F.A. University of Cincinnati 1993
Public Art, Social Sculpture, Community and new genre art practices; Urban Education

# College of Engineering and Computer Science 

Chilukuri K Mohan, Dean<br>227 Link Hall<br>eng-cs.syr.edu

## About the College

These are exciting times in engineering and computer science. Revolutionary changes in multiple areas continue to transform the operations of most traditional employers of engineers and computer scientists. The demand for individuals with degrees in engineering and computer science is greater than ever. In addition, new nontraditional opportunities for engineering and computer science graduates are opening in law, medicine, public policy, finance, management, and communications. Traditional tools and technical know-how are often no longer enough. Today's engineers and computer scientists must possess a broader set of perspectives, experiences, and skills to contribute successfully in a dynamic, rapidly changing world.

Syracuse University College of Engineering and Computer Science (E\&CS) offers courses and programs that are designed to prepare leaders for a high-technology, knowledge-based global community. Through courses in the college and across the University, E\&CS offers students a breadth of opportunities and experiences that is unmatched by programs at most other universities.

The college offers ten undergraduate programs: bachelor of science programs in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, and bachelor science program in computer science is accredited by the Computing Accreditation Commission of ABET, http://www. abet.org. In addition we offer, in collaboration with the i-School, the Systems and Information Science, BS.

New engineering and computer science students enroll in ECS 101 - Introduction to Engineering and Computer Science. ECS 101 provides a broad introduction to each of our degree programs, allowing students an opportunity to explore each area before they choose a major. ECS 101 is also open to students of other SU colleges who are interested in exploring the areas of engineering or computer science as a potential field of academic study.
E\&CS students may choose from a variety of study
options, including technical and non-technical minors, combined B.S./M.S. degree programs, and a combined undergraduate degree program between E\&CS and the College of Arts and Sciences. The college also offers its students opportunities for co-op, study abroad, and undergraduate research.
Founded in 1901, E\&CS enjoys a long-standing reputation for excellence and innovation. The college community is composed of outstanding students, faculty, and staff who are dedicated to personal excellence and success.

## Educational Mission and Vision

## The College Mission

The mission of the college is to promote learning in engineering and computer science through integrated activities in teaching, research, scholarship, creative accomplishments, and service.

## The College Vision

The vision of the college is to earn recognition among universities for engineering and computer science programs that prepare leaders for a hightechnology, knowledge-based, global community. The vision for E\&CS is a distinct student-centered research university model for engineering and computer science education. Features of this model include the following:
the commitment that all programs relate directly to students and their learning experiences;
the commitment that research is an integral element of the learning environment;
the flexibility for students to pursue the diversity of learning opportunities available in a broad university setting; and
the commitment to world-class quality in courses and programs.

## Accreditation

Bachelor of science programs in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, and mechanical engineering accredited by the Engineering Accreditation Commission of ABET, and bachelor science program in computer science accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

## Student Outcomes

Student outcomes in all B.S. in engineering

## programs:

an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as well as to analyze and interpret data
an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
an ability to function on multidisciplinary teams
an ability to identify, formulate, and solve engineering problems and understanding of professional and ethical responsibility
an ability to communicate effectively
the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
a recognition of the need for, and an ability to engage in life-long learning
a knowledge of contemporary issues
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
Student outcomes in the B.S. in computer science program:
An ability to apply knowledge of computing and mathematics appropriate to the discipline

An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs

An ability to function effectively on teams to accomplish a common goal
An understanding of professional, ethical, legal, security and social issues and responsibilities

An ability to communicate effectively with a range of audiences

An ability to analyze the local and global impact of computing on individuals, organizations, and society

Recognition of the need for and an ability to engage in continuing professional development
An ability to use current techniques, skills, and tools necessary for computing practice.

## Undergraduate Program Overview

The college offers ten undergraduate programs: bachelor of science programs in aerospace engineering, bioengineering, chemical
engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, and bachelor science program in computer science is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

## Aerospace Engineering

Bioengineering
Chemical Engineering
Civil Engineering
Computer Engineering
Computer Science
Environmental Engineering
Mechanical Engineering
Systems and Information Science

## General Regulations

For academic rules and regulations that apply to all University students, see the Academic Rules section of this catalog, which also contains special regulations that apply only to students matriculated in the College of Engineering and Computer Science.

Engineering and computer science students enrolling at Syracuse University must maintain at least a 2.0 grade point average in all engineering, mathematics, and science courses taken at SU. Furthermore, all students must satisfactorily complete at least 24 credits, including summer courses taken here or transferred to Syracuse University from another institution, within any 12-month period to maintain satisfactory progress, with a 2.0 semester and overall average; students cannot graduate with courses having missing grades or incompletes.
For graduation, students must have a minimum cumulative GPA of 2.00 and at least a 2.00 GPA in all ECS, mathematics, and science courses taken at Syracuse University. In addition, students must meet all degree requirements specific to their chosen major.

## Arts and Sciences/ Engineering \& Computer Science (Combined Degrees)

Arts and Sciences contact the Advising and Academic Support Office, 329 Hall of Languages, 315-443-3150.

Engineering and Computer Science contact Maria Marceau, Director of Student Records, 130 Link Hall, 315-443-5191.
Engineering Faculty, See individual departments
listed in the "College of Engineering and Computer Science."

The College of Arts and Sciences, in cooperation with the College of Engineering and Computer Science, offers a five-year combined curriculum. Students complete the requirements for and receive two degrees-one degree in a major of their choice in engineering or computer science and one degree in a major in the College of Arts and Sciences. Students who enter this program are urged to talk with advisors in both departments in which they plan to major as soon as possible. It is important that they learn the curricular requirements of each department in order to understand how best to merge the two sets of requirements.
Students register with the College of Arts and Sciences as the home college for the first three years. They receive a basic education in mathematics and science along with a liberal education in the social sciences and humanities. While most of the coursework taken during that time is in the liberal arts, approximately one quarter of the program consists of first- and second-year courses in the engineering field chosen by the students.

After completing the third year, students transfer the home college designation to the College of Engineering and Computer Science while maintaining a connection with the College of Arts and Sciences. The fourth and fifth years of the program focus on engineering subjects. The B.A. or B.S. degree in the Arts and Sciences major may be awarded upon completion of the fourth year, but increased scheduling options are possible by completing both degrees at the end of the fifth year.
While some flexibility is possible in the program, it is a formalized curriculum. Students usually major in mathematics, biology, physics, or chemistry in the College of Arts and Sciences, although other majors are allowed upon approval by both colleges. The completion of the combined degree program requires a minimum of 150 total credits earned.

Admission requirements are the same as those for students entering the College of Engineering and Computer Science. Students who are already enrolled in the College of Engineering and Computer Science or the College of Arts and Sciences may transfer into the combined program provided requirements can be met. Such transfers must be approved by both colleges.

## Intra-University Transfer

Students who wish to transfer into any program within the College of Engineering and Computer Science from another school or college within the University should have a strong record of achievement and demonstrated success in key
technical courses and a cumulative GPA of 3.00 Specifically, it is critical for the applicant to have proven their ability to excel in college-level calculus (by completing at least one of MAT 295, MAT 296, or MAT 397 with a grade of B- or better) and science (by completing at least one set of PHY 211/PHY 221 or CHE 106/CHE 107 with a grade of B- or better). Students who wish to major in computer science must also complete CIS 252 with a grade of at least a B.

## Student Success Center

The Student Success Center in the College of Engineering and Computer Science is home to three key resources: First-Year Programs. Programs Rooted In Developing Excellence (PRIDE), and Career Services. Students interested in further information on the Student Success Center can stop-by 121 Link Hall, call 315-443-2582, or email success@ecs.syr.edu.

## First-Year Programs

First-Year Academic Advisors work directly with students on course selection, curriculum policies/ procedures, assist with the college transition, and exploration of available academic resources.

Pathfinders are peer mentors who will help students' transition to life as a new member of the SU community. Pathfinders offer guidance, support, and friendship to new students throughout the first semester and beyond.

Programs Rooted In Developing Excellence (PRIDE)
PRIDE evolved from the Minority Engineering Program (MEP) Office established in 1976. At present
PRIDE provides programming that meets the needs of and fosters excellence in the educational, professional, and personal development of all undergraduate students. PRIDE is also committed to helping students develop leadership skills through involvement in recognized student organizations. The activities, leadership opportunities, and community service projects sponsored by the organizations are important to the students, the college, the University, and the local Syracuse community, as they prepare to be future societal leaders.
Academic Excellence Workshops (AEW) are peer-facilitated, one-credit, pass/fail courses designed to supplement the instruction in many first and second year courses. Students are able to register for these classes during the course add period via MySlice.
Success Coaches are available to help students define, clarify, and achieve their personal and academic goals. This is accomplished through one-on-one meetings or in a small group workshop session.

## Career Services

Our mission is to educate and coach students so that they can successfully obtain co-op/ internship/research opportunities and ultimately land a full time job in their field upon graduation. We invite our students to take advantage of our offerings so that we can empower them to get the most out of their college experience.
Highlights of our services include, but are not limited to:

## CAREER PREPARATION:

Resume preparation
Interview skills
Job search strategies
Cover letter writing
Negotiating the offer
Business acumen coaching
Mock interviewing
Career fair preparation sessions
CAMPUS FAIRS
College specific career fair
Campus-wide career fair
Employer networking and information events

## CO-OP:

The Engineering and Computer Science Cooperative Education program (Coop) empowers undergraduate students to take advantage of experiential learning opportunities that have proven to aid them in successfully reaching their post-graduate goals. The Co-op program consists of full-time professional work primarily during the summer. This design allows students the opportunity to gain more than six months of paid work experience in their field of study and still graduate in four years. Working during the academic year is an option that students may choose, with the understanding that their ability to graduate in four years may be affected. To be eligible, students must be enrolled full time in the College of Engineering and Computer Science.

The Engineering and Computer Science Cooperative Education program (Co-op) empowers undergraduate students to take advantage of experiential learning opportunities that have proven to aid them in successfully reaching their post-graduate goals. The Co-op program consists of full-time professional work primarily during the summer. This design allows students the opportunity to gain more than six months of paid work experience in their field of study and still graduate in four years. Working during the academic year is an option that students may choose, with the understanding that their ability to graduate on time may be affected. To be eligible,
students must be enrolled full time in the College of Engineering and Computer Science.

Contact Cooperative Education Program, 121 Link Hall, 315-443-2582.

## Undergraduate Minors

## Engineering Students

Engineering students can pursue any minor within the University. Students are required to complete from 128 to 139 credits, depending on their program of study. Minors can be earned by taking optional or additional coursework. Minors commonly pursued include mathematics, economics, and management.

## Computer Science Students

Computer science students can easily pursue any minor within the University. Of the 123 credits required for graduation, 9 credits are free electives. Minors commonly pursued are mathematics, cognitive science, or operations management.

## All Other Students

Students enrolled in colleges other than Engineering and Computer Science can earn a minor in computer science. Students with sufficient background in math and science can pursue a minor in computer engineering or electrical engineering.

## Bioengineering Students

Bioengineering students can earn a mathematics minor within the prescribed curriculum. Other minors (e.g., biology) can be earned by taking additional courses. Students enrolling with AP credit or who take summer school courses can easily select from a variety of minors.

## Computer Engineering Students

Students can easily pursue two minors simultaneously. Without adding any courses to their programs of study, they can pursue a minor in mathematics, and a second one in a discipline outside the College of Engineering and Computer Science.

## Electrical Engineering Students

Students can easily pursue a technical minor, a non-technical minor without adding any additional course to their program of study. Additionally, a mathematics minor can be obtained by taking only one additional math course.

Study Abroad

In a time of rapidly growing global complexity and opportunity, international study is an increasingly important and relevant component of undergraduate study, especially for students preparing for careers in engineering or computer science. Of all the major professions, engineering and computer science are the most likely to involve international activity. In addition to strong technical skills, employers are increasingly looking for international experience, cross-cultural skills and perspectives, and an understanding of the world's diversity.
For over 20 years, E\&CS in a partnership with SU Abroad, has been a national leader in providing distinctive international study opportunities. These opportunities include:
Year Abroad Program in London
Fall or Spring semester in Dublin, Hong Kong, Santiago,Sydney, Florence and Madrid
Spring Semester in Istanbul, Turkey
Summer Research program in Strasbourg, France
E\&CS international study programs give students the opportunity to gain global experience, develop new ways of viewing the world, form lasting friendships abroad, and deepen their connection to other countries, languages and cultures. Students with these experiences gain a competitive edge in today's multinational, multicultural environment.

To participate, students must be in good academic standing with a cumulatively GPA of 3.0 and in one of Syracuse University's engineering or computer science programs or in an equivalent program elsewhere. Participants must also meet any language requirements of the host country.
For further information, contact the College of Engineering and Computer Science Study Abroad Office in 130 Link Hall or Syracuse University Study Abroad, 106 Walnut Place (suabroad.syr. edu).

## Facilities and Research

## Undergraduate

## Facilities

The College of Engineering and Computer Science has facilities in three buildings on the SU Main Campus: Edwin A. Link Hall, Bowne Hall and the Center for Science and Technology, located at the east end of the Quad. In addition, the college operates teaching and research facilities at the Institute for Sensory Research, located on SU's South Campus.
More than 200 computers are available around the clock for the exclusive use of students in engineering and computer science. These
computers are housed in Windows, Mac and UNIX computer labs networked by up-to-date servers offering a range of software appropriate to the disciplines offered by the college. Information about E\&CS specific IT resources can be found at http://helpdesk.lcs.syr.edu/.

Students in the college can readily access campus-wide resources operated by the University's central Information Technology Services (ITS) organization. Wireless network access is available in all campus buildings and across the Quad. Detailed information about campus-wide IT resources is available at http:// its.syr.edu.

## Major

## Aerospace Engineering, BS

## Department Chair:

Dr. H. Ezzat Khalifa, 263 Link Hall, hekhalif@ sy.edu, 315-443-1286

## Program Director:

Dr. John Dannenhoffer, 245 Link Hall, jfdannen@ syr.edu, 315-443-3340

## Faculty

Jeongmin Ahn, Michelle Blum, Thong Dang, John F. Dannenhoffer, Barry D. Davidson, Mark N. Glauser, Melissa Green, Vadrevu R. Murthy, Jianshun S. Zhang
The mission of the aerospace engineering program at Syracuse University is to educate and to promote learning and discovery in aerospace engineering and to prepare students for a career of technical excellence and professional growth and leadership in a complex and competitive technological environment.

The program educational objectives of the aerospace engineering curriculum are to enable graduates of the program to do the following:
apply the physical, mathematical, and engineering sciences to professional practice or to advanced study in aerospace engineering or related fields;
be cognizant of societal context and ethical responsibility in professional practice;
function productively on teams and communicate ideas to both technical and non-technical audiences; and
be agile, innovative, and adaptable in an increasingly diverse and global environment.
Opportunities for aerospace engineers will continue to expand within the military, civilian,
and general aviation sectors spurred on by the development of new aircraft that extends to civilian supersonic aircraft and unmanned aerial vehicles. This growth in aircraft demand (as well as the need for higher efficiencies, longer ranges, and lower cost aircraft) is being fueled by the increasing global demand for air travel in the international marketplace. Space exploration has also entered a period of increased activity that includes an increased exploitation of satellites to service the demand for global communication, the need for low-cost assured access to space, the international space station, and planetary missions.

We prepare our students for this changing environment by providing an opportunity to gain marketable and relevant skills that can lead to success in a wide range of careers. The distinctive signature of undergraduate aerospace engineering at Syracuse University is the ability to fit a minor into the curriculum. Students explore the breadth of Syracuse University by complementing their aerospace engineering degree with a minor in business, public policy, fine arts, public communications, and many more.
The technical focus of the B.S. program in aerospace engineering (AEE) is to develop a sound educational basis for the analysis and design of aerospace systems, with emphasis on the structure, aerodynamics, flight/orbital mechanics, and propulsion of aircraft and spacecraft systems. Aerospace engineering is a field constantly pushing the limits of technology. The B.S. AEE program stresses the fundamental physical, mathematical, and engineering principles that form the broadest base for future work in a fast-changing field.
The B.S. AEE program is designed to prepare graduates for either immediate employment or for continuing studies at the graduate level. One distinguishing feature of the program is the opportunity for undergraduate students to participate in current research projects, which provide first-hand exposure both to advanced topics of current interest and to challenges typical of graduate school or industrial research. Research experiences for undergraduates are available in many areas, including fluid dynamics, aerodynamics, solid mechanics, and applications of high-performance computers.
Requirements for the B.S. AEE program appear below. For the first five semesters the recommended sequence of courses for the B.S. AEE program is nearly identical to the recommended program for the B.S. degree in mechanical engineering (MEE), which demonstrates the similarity and complementary nature of the two disciplines. Courses carrying the prefix MAE indicate class material and assignments are drawn from both aerospace and mechanical engineering applications. Beginning
in the sixth semester, students in the B.S. AEE program begin taking courses addressing topics unique to aerospace engineering, including aerodynamics, aircraft structures, propulsion systems, and the dynamics of aerospace vehicles.
Experience with open-ended design problems is obtained in a sequence of courses that span the entire curriculum. The sequence begins with introductory design experience in the first-year courses ECS 101 and MAE 184. Upper-division courses involving design content include classes on the mechanics of solids and structures, aerospace structures, aerospace vehicle dynamics, aerodynamics, dynamics and controls, and propulsion. The design sequence culminates with the cap-stone design experience (AEE 472) that requires students to integrate knowledge from all areas in the design of a complete aircraft or spacecraft system.
Topics relevant to the analysis and design of space vehicles are included in AEE 446, AEE 471, and AEE 577.

The B.S. AEE curriculum allows for programs of study that can be tailored by students to take advantage of the diversity of strengths across both ECS and all of Syracuse University. We provide engineering students with opportunities to complete minors in areas that can complement technical knowledge-such as international affairs, business, and public policy-thus enhancing the value and attractiveness of a Syracuse engineering education. Students can also elect to pursue a technical minor or take a distribution of electives, which will include liberal arts classes, free electives, and additional depth in aerospace engineering.
Students are encouraged to develop a plan for elective selection during their first year. The planning process should include discussions with the student's academic advisor, other faculty members, and peer advisors. The MAE Department offers most undergraduate technical elective courses on a two-year cycle. It may be necessary for a student to modify the sequence of courses to accommodate a technical elective course of personal interest.
In addition to successfully completing the requirements for the aerospace program, graduates from this program must also achieve the following student outcomes:
an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as well as to analyze and interpret data
an ability to design a system, component, or process to meet desired needs, including the integration of multiple aeronautical topics
an ability to function on multidisciplinary teams an ability to identify, formulate, and solve
engineering problems
an understanding of professional and ethical responsibility
an ability to communicate effectively
the broad education necessary to understand the impact of engineering solutions in global and societal contexts
a recognition of the need for, and an ability to engage in life-long learning
a knowledge of contemporary issues
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
an ability to apply knowledge of aerodynamics, structures, propulsion, flight mechanics and orbital mechanics in the analysis of aerospace vehicles.

This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org.

## Aerospace Engineering Requirements

## First Year, Fall Semester

ECS 101 - Introduction to Engineering and Computer Science
MAT 295 - Calculus I
CHE 107 - General Chemistry Laboratory I
CHE 150 - General Chemistry for Engineers
WRT 105 - Studio 1: Practices of Academic Writing
Elective \#1 (3)

## Total 17

## First Year, Spring Semester

MAE 184 - Engineering Graphics and ComputerAided Design

ECS 104 - Engineering Computational Tools
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
Elective \#2 (3)
Total 17
Second Year, Fall Semester
ECS 221 - Statics
ECS 326 - Engineering Materials, Properties, and Processing

PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
Elective \#3 (3)

## Total 17

## Second Year, Spring Semester

MAE 251 - Thermodynamics
ECS 222 - Dynamics
ECS 325 - Mechanics of Solids
MAT 485 - Differential Equations and Matrix Algebra for Engineers

WRT 205 - Studio 2: Critical Research and Writing

## Total 17

## Third Year, Fall Semester

MAE 315 - Mechanical and Aerospace Engineering Laboratory

MAE 341 - Fluid Mechanics
MAE 312 - Engineering Analysis
ELE 231 - Electrical Engineering Fundamentals I
ELE 291 - Electrical Engineering Laboratory I
Elective \#4 (3)
Total 17
Third Year, Spring Semester
AEE 342 - Aerodynamics
AEE 343 - Compressible Flow
MAE 321 - Dynamics of Mechanical Systems
ELE 312 - Control Systems for MAE
Elective \#5 (3)

## Total 16

Fourth Year, Fall Semester
AEE 427 - Aircraft Performance and Dynamics
AEE 446 - Propulsion
AEE 471 - Design/Analysis of Aerospace Structure
Elective \#6 (3)
Total 14

## Fourth Year, Spring Semester

AEE 472 - Synth of Aerosp Systems
AEE 577 - Introduction to Space Flight
Elective \#7 (3)
Elective \#8 (3)

Total 13

## Program Total 128

## B.S. AEE Program

There are a total of 24 elective credits in the B.S. AEE program. These credits may be distributed in one of the following two ways:
A student may complete any University minor that requires at least 12 credit hours beyond the core AEE curriculum. In addition to, or as part of, this minor, at least 9 credit hours must be taken from the social sciences or humanities (SS/H). Excluding those courses that count towards the minor, a maximum of 6 credit hours that are neither SS/H nor technical electives may be taken as part of the 24 elective credits.

A student who does not complete a University minor must take at least 9 credits from the social sciences or humanities (SS/H), at least 6 credits of technical electives, and a maximum of 6 credit hours that are neither SS/H nor technical electives.
Technical electives consist of all 300 level and above courses offered by any department within the college of engineering and computer science or by the math or physics departments, except for ECS 391, ECS 392 and any course numbered 300,400 or 500 that is offered outside of the MAE Department.

However, in some instances these courses may be approved by petition. In addition, no more than 3 credit hours of technical electives may be taken outside of the MAE department.

## Other

GPA: 2.0 (All students must earn a minimum cumulative GPA of 2.00 and at least 2.00 GPA in all math, science and engineering courses in order to be awarded an SU degree.)

## Note:

Do not repeat prerequisites for admission into the major.

## Recommended Technical Electives

AEE 490 - Independent Study
AEE 527 - Helicopter Dynamics
MAE 355 - Fundamentals of Heat Transfer
MAE 430 - Introduction to Design Optimization
MAE 536 - Composite Materials
MAE 545 - Applications of Fluid Mechanics
MAE 571 - Applications of Computational Fluid

## Dynamics

MAE 573 - Application of Finite Element Analysis
MAE 585 - Principles of Turbomachines
MAE 587 - Design of Solar Energy System
MAE 588 - Principles of Wind Turbines
Bioengineering, BS

## Department Chair:

Radhakrishna Sureshkumar
329F Link Hall
315-443-1931; fax: 315-443-9175

## Faculty

Rebecca Bader, Jesse Bond, Katie Cadwell, Ruth Chen, Mandy Esch, Jeremy Gilbert, Julie Hasenwinkel, James Henderson, Ian Hosein, George Martin, Patrick Mather, Shikha Nangia, Dacheng Ren, Ashok Sangani, Pranav Soman, Radhakrishna Sureshkumar, Lawrence Tavlarides, Angela Zachman

## Adjunct/Research Faculty:

Jurgen Babirad, Gino Duca, Bart Farell, Eric Finkelstein, Shelley Stephens, Kent Ogden, David Quinn, Dana Radcliffe, Suresh Santanam, Fred Werner

## Affiliate Faculty:

Joseph Chaiken, Andria Staniec Costello, Martin Forstner, Juntao Luo, Yan-Yeung Luk, Cristina Marchetti

## Emeritus Faculty:

Gustav Engbretson, John Heydweiller, Philip Rice, Klaus Schroder, Robert L. Smith, S. Alexander
Stern, Chi Tien, Josef Zwislocki

## Undergraduate Bioengineering Program Director:

Angela Zachman<br>361 Link Hall<br>315-443-4848<br>alzachma@syr.edu<br>The mission of the Department of Biomedical and Chemical Engineering is to provide students with mentoring, curricular experience, and extracurricular opportunities consistent with their individual career objectives in order to

prepare them to apply science, mathematics, and engineering knowledge to serve the needs of society;
instill in them a deep sense of respect for others and a strong foundation in professional and social ethics; and
develop in them the understanding that continued education will further their professional and leadership skills.

## Program Educational Objectives

The objectives of the undergraduate bioengineering program are:
graduates will master engineering and biological fundamentals enabling them to apply critical thinking to solve problems at the interface of science or medicine and engineering;
graduates will have a broad education that develops their ability to make informed and ethical decisions and understand the engineer's role in society;
graduates will be able to effectively communicate their work and ideas;
graduates will be prepared for success in the biomedical industry and postgraduate education in engineering, science, or professional studies.

The bioengineering program is designed for students interested in the application of physical science techniques to life-science problems, preparing them for graduate study in bioengineering or medicine as well as for careers in biomaterial design, biomedical instrument design, medical device design, orthopedic prosthesis design, or engineering support for healthcare services. Introduced in the student's first semester and culminating in the senior year with a capstone project, the important topic of engineering design is an integral part of the curriculum. Fundamental concepts from courses across the entire curriculum are integrated with formally delivered design concepts to produce a project. The project is presented to the faculty in both oral and written forms.

The bioengineering curriculum provides a solid foundation in mathematics, physics, engineering, and biology in preparation for advanced specialized studies. In consultation with a faculty advisor, students can specialize their curriculum to emphasize preparation for industry, research, or premedical studies. This curriculum shares several courses with the chemical engineering program. These courses provide our students with a strong background in the engineering sciences so they can explore emerging topics at the interface of the two fields. Students interested in research with the possibility of continued study in graduate
school are encouraged to elect one or more independent study projects and a graduate-level course in an area of research interest. Appropriate use of electives in this emphasis and strong academic performance can lead to graduation with University Honors.

With the careful selection of electives, a student can meet the entrance requirements established by the Association of American Medical Colleges.

Graduates from the program in bioengineering must achieve the following student outcomes:
an ability to apply knowledge of mathematics, science, and engineering;
an ability to design and conduct experiments, as well as to analyze and interpret data;
an ability to design a system, component, or process to meet a desired need;
an ability to function on multidisciplinary teams;
an ability to identify, formulate, and solve engineering problems;
an understanding of professional and ethical responsibility;
an ability to communicate effectively;
the broad education necessary to understand the impact of engineering solutions in a global and societal context;
a recognition of the need for, and an ability to engage in life-long learning;
a knowledge of contemporary issues;
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
an understanding of biology and physiology, and the capability to apply advanced mathematics (including differential equations and statistics), science, and engineering to solve the problems at the interface of engineering and biology
the ability to make measurements on and interpret data from living systems, addressing the problems associated with the interaction between living and non-living materials and systems

This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org.

## Bioengineering Course Requirements

## First Year, Fall Semester (17)

CHE 106 - General Chemistry Lecture I
CHE 107 - General Chemistry Laboratory I
MAT 295 - Calculus I
ECS 101 - Introduction to Engineering and

Computer Science
WRT 105 - Studio 1: Practices of Academic Writing
Social Science/Humanities elective (3)

## First Year, Spring Semester (15)

CHE 116 - General Chemistry Lecture II
CHE 117 - General Chemistry Laboratory II
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
ECS 104 - Engineering Computational Tools

## Second Year, Fall Semester (16)

CHE 275-Organic Chemistry I
CHE 276-Organic Chemistry I Laboratory
BEN 231 - Mass and Energy Balances
MAT 397 - Calculus III
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
Second Year, Spring Semester (18)
BEN 212 - Experimental Methods in Chemical Engineering and Bioengineering

## ECS 221 - Statics

ELE 231 - Electrical Engineering Fundamentals I
MAT 485 - Differential Equations and Matrix Algebra for Engineers
WRT 205 - Studio 2: Critical Research and Writing Social Science/Humanities elective (3)

## Third Year, Fall Semester (16)

ECS 326 - Engineering Materials, Properties, and Processing
BEN 301 - Biological Principles for Engineers
BEN 333 - Fluid Transport
ELE 232 - Electrical Engineering Fundamentals II
Social Science/Humanities elective (3)
Third Year, Spring Semester (17)
BEN 341 - Fundamentals of Heat and Mass Transfer
BEN 364 - Quantitative Physiology
BEN 575 - Process Control
Social Science/Humanities elective (3)
Technical Elective (3)
Fourth Year, Fall Semester (16)
BEN 465 - Biomechanics

BEN 481 - Bioinstrumentation
BEN 485 - Bioengineering Laboratory
Social Science/Humanities elective (3)
Fourth Year, Spring Semester (15)
BEN 468 - Biomaterials \& Medical Devices
BEN 487 - Bioengineering Capstone Design
Social Science/Humanities elective (3)
Technical electives (6)
Total 130

## Chemical Engineering, BS

## Department Chair:

Radhakrishna Sureshkumar
329F Link Hall
315-443-1931; fax: 315-443-9175

## Faculty

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Undergraduate Chemical
Engineering Program
Director:
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The mission of the Department of Biomedical and Chemical Engineering is to provide our students with mentoring, curricular experience and extracurricular opportunities consistent with their individual career objectives in order to:
Prepare them to apply science, mathematics and engineering knowledge to serve the needs of society;
Instill in them a deep sense of respect for others and a strong foundation in professional and social ethics;
Develop in them the understanding that continued education will further their professional and leadership skills.
Graduates of the program will have mastered the chemical engineering fundamentals necessary to serve as practicing engineers and will be prepared for further studies in engineering, science, or other professions. These fundamentals include an understanding of basic engineering concepts, the collection of information from experimentation and from the scientific and technical literature, and the prediction of system behavior through the development and application of mathematical models.
Graduates will be able to apply critical thinking, problem solving, and teamwork and research skills to the design of chemical engineering processes and the solution of scientific and technical problems.
Graduates will be able to effectively synthesize and then communicate their work and ideas through written, oral, and visual and graphical formats and they will understand the impacts on and responsibilities to society of chemical engineering practices.
Chemical engineering has a rich past; chemical engineers have been identified with the large scale manufacture of numerous products including chemicals, fibers, foods, fuels, pharmaceuticals, plastics, pulp and paper, and rubber. Because chemical engineering is the most versatile of the engineering disciplines, chemical engineers in the future will contribute to diverse new and emerging technologies. They will seek new ways to process our energy and natural resources; they will play key roles in the areas of environmental cleanup and protection, management of hazardous wastes, and process and product safety. They will be involved in new technologies such as biotechnology and biomedicine, and in the development and production of new materials such as polymers, ceramics, and advanced composites.
The chemical engineering curriculum prepares students to apply the fundamentals of chemistry, physics, and engineering to problems related to the efficient and safe production of chemical and related products. The program focuses on developing a solid background in the principles
of chemical engineering and their applications to the challenges facing industry and society. If a student wishes to specialize in biochemical, environmental, or polymer engineering, he or she can select appropriate science and engineering courses to supplement the general curriculum.

This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org.

The curriculum prepares students to apply the fundamentals of chemistry, physics, mathematics, and engineering to diverse problems in the field of chemical engineering. Engineering design concepts are integrated throughout all four years of the chemical engineering program.
Beginning with ECS 101 in the fall of the first year, students are introduced to the engineering method for problem solving, and concepts of engineering design. In this way students see how mathematics, basic sciences, and engineering science provide the necessary tools for design and how to go about the design process.

During the sophomore, junior, and senior years, problems of increasing complexity and open-endedness are presented to students in the chemical engineering courses, continually challenging their technical expertise, creativity, and knowledge.

Finally, in their senior year courses, students are required to complete major design projects in their courses and laboratory. These projects are open-ended and designed to build upon the students' understanding and mastery of the fundamentals of mathematics, sciences, and engineering topics. They also consider broader social issues in addition to technical issues such as environmental impact and safety.

Many students take advantage of the low student/ faculty ratio by participating in research or independent study projects. There are part-time, summer, co-op, and internship opportunities available for students seeking work experience. International study opportunities are also available.

Graduates from the program in chemical engineering must achieve the following student outcomes:
an ability to apply knowledge of mathematics, science, and engineering;
an ability to design and conduct experiments, and to analyze and interpret data;
an ability to design a system, component, or process to meet desired needs;
an ability to function on multidisciplinary teams;
an ability to identify, formulate, and solve engineering problems;
an understanding of professional and ethical
responsibility;
an ability to communicate effectively;
the broad education necessary to understand the impact of engineering solutions in a global and societal context;
a recognition of the need for, and an ability to engage in life-Iong learning;
a knowledge of contemporary issues;
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
an appreciation of diversity issues in society.

## Chemical Engineering Course Requirements

## First Year, Fall Semester (17)

CHE 106 - General Chemistry Lecture I
CHE 107 - General Chemistry Laboratory I
MAT 295 - Calculus I
ECS 101 - Introduction to Engineering and Computer Science
WRT 105 - Studio 1: Practices of Academic Writing

Social Science/Humanities elective (3)

## First Year, Spring Semester (15)

CHE 116 - General Chemistry Lecture II
CHE 117 - General Chemistry Laboratory II
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
ECS 104 - Engineering Computational Tools
Second Year, Fall Semester (16)
CHE 275 - Organic Chemistry I
CHE 276 - Organic Chemistry I Laboratory
CEN 231 - Mass and Energy Balances
MAT 397 - Calculus III
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II

## Second Year, Spring Semester (18)

CEN 212 - Experimental Methods in Chemical Engineering and Bioengineering

CEN 252 - Chemical Engineering Thermodynamics I

MAT 485 - Differential Equations and Matrix Algebra for Engineers
WRT 205 - Studio 2: Critical Research and Writing

Social Science/Humanities elective (6)

## Third Year, Fall Semester (17)

ECS 326 - Engineering Materials, Properties, and Processing

CHE 346 - Physical Chemistry
CHE 347 - Physical-Analytical Chem Lab
CEN 333 - Fluid Transport
CEN 353 - Chemical Engineering Thermodynamics II

WRT 307 - Advanced Writing Studio: Professional Writing

## Third Year, Spring Semester (15)

CEN 311 - Chemical Engineering Laboratory I
CEN 341 - Fundamentals of Heat and Mass Transfer

CEN 575 - Process Control
CHE 356 - Physical Chemistry
Technical elective (3) (at least 1 technical elective must be in CEN)

## Fourth Year, Fall Semester (17)

CEN 412 - Chemical Engineering Laboratory II
CEN 542 - Heat and Mass Transfer Operations
CEN 587 - Chemical Reaction Engineering
Technical elective (3)
Social Science/Humanities electives (6)
Fourth Year, Spring Semester (13)
CEN 574 - Process Design
Social Science/Humanities elective (3)
Technical electives (6)
Total 128
Civil Engineering, B.S.

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The mission of the Civil and Environmental Engineering Department is to promote learning and the creation, dissemination, and application of knowledge in civil and environmental engineering through integration of teaching, scholarship, and service.

The goal of the Civil and Environmental Engineering Department is to prepare students for engineering practice, advanced study, and lifelong learning in civil and environmental engineering. Graduates are expected to be proficient in the fundamentals of sustainable engineering analysis and design and understand the importance and methods of effective communication. Students are encouraged to use the extensive international network and educational resources of Syracuse University and the Syracuse community to broaden and enhance the quality of their university education.

The educational objectives of the civil engineering program are to produce graduates who:
can apply technical knowledge and problemsolving skills to advance their careers and serve the community;
are prepared for engineering practice and advanced studies in civil engineering;
will engage in life-long learning to keep themselves abreast of new developments in their fields of practice or study; and
are capable of effective written and oral communications

Our student outcomes are in line with those identified by the Engineering Accreditation Commission of ABET. At the time of their graduation, our students should have acquired:
an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as well as to analyze and interpret data
an ability to design a system, component, or process to meet desired needs within realistic constraints
an ability to function on multi-disciplinary teams
an ability to identify, formulate, and solve engineering problems
an understanding of professional and ethical responsibility
an ability to communicate effectively
the broad education necessary to understand the impact of engineering solutions in a global, economical, environmental, and societal context
a recognition of the need for, and an ability to engage in life-long learning
a knowledge of contemporary issues
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

## Civil Engineering Description

Civil engineering is the broadest of the engineering disciplines, extending across many interrelated technical specialties. These technical specialties include structures, hydraulics, geotechnical, environmental, transportation, construction, and water resources. Civil engineers plan, design, and construct facilities essential to modern life in both the private and the public sectors. These facilities vary widely in nature, size, and scope, and include bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, facilities for water, collection and treatment facilities for wastewater, and many others.

The first-year curriculum emphasizes the physical and mathematical sciences. Additional courses in mathematics and the sciences, as well as introductory courses in civil engineering measurement and sustainability, are taken during the second year. The last two years of the program focus on planning, design, analysis, and management in civil engineering. The curriculum provides flexibility to allow students to customize their academic programs and take advantage of the diversity across both the college and all of Syracuse University. The four-year program includes coursework in the social sciences and humanities necessary for a well-rounded academic background.
By selecting electives carefully, students may specialize in any of the following areas: structural engineering, which deals with the analysis, design, and rehabilitation of structures under static and dynamic loads; environmental engineering, which involves the purification and distribution of water in cities and the proper disposal of sewage and industrial wastes; geotechnical engineering, which analyzes the properties of soils and rocks that support and affect the behavior of structures, pavements, and underground facilities and construction engineering which concerns the planning and execution of large-scale construction and infrastructure projects. Students may also complete minors in a variety of subjects.

This program is accredited by the Engineering

Accreditation Commission of ABET, http://www. abet.org.

Adjustments in the program can be made to accommodate transfer students from accredited two- and four-year institutions so they may develop their programs of study as soon as possible after admission..

## Civil Engineering Curriculum

## First Year, Fall Semester

MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
ECS 101 - Introduction to Engineering and Computer Science

WRT 105 - Studio 1: Practices of Academic Writing

SS/Hum Elective (3)
Total 17

## First Year, Spring Semester

MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
SS/Hum Elective (3)
SS/Hum Elective (3)
Select one of the following two courses:

EAR 203 - Earth System Science *
SS/Hum Elective (3)
Total 17/18
Second Year, Fall Semester
MAT 397 - Calculus III
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
ECS 221 - Statics
CIE 273 - Introduction to Geomatics and BIM
Select one of the following two courses:

EAR 110 - Dynamic Earth *
SS/Hum Elective (3)
Total 17/18

## Second Year, Spring Semester

MAT 485 - Differential Equations and Matrix Algebra for Engineers

ECS 222 - Dynamics
ECS 325 - Mechanics of Solids
CIE 274 - Sustainability in Civil and Environmental Systems

WRT 205 - Studio 2: Critical Research and Writing

## Total 16

Third Year, Fall Semester<br>CIE 331 - Analysis of Structures and Materials<br>CIE 337 - Introduction to Geotechnical Engineering

CIE 341 - Introduction to Environmental Engineering
CIE 327 - Prin of Fluid Mechanics
WRT 307 - Advanced Writing Studio: Professional Writing

Total 17

## Third Year, Spring Semester

CIE 329 - Probability, Statistics and Risk for Civil and Environmental Engineering

CIE 332 - Design of Concrete Structures
CIE 338 - Foundation Engineering
CIE 326 - Engineering Materials
CIE 352 - Water Resources Engineering
CIE 401 - Construction Engineering and Project Management

Total 17

## Fourth Year, Fall Semester <br> CIE 326 - Engineering Materials <br> CIE 443 - Transportation Engineering

SS/Hum Elective (3)
Select one of the following courses (3/4):
CIE 442 - Treatment Processes in Environmental Engineering
CIE 463 - Introduction to Sustainable Engineering
CIE 471 - Environmental Chemistry and Analysis
Total 12/13

## Fourth Year, Spring Semester <br> CIE 475 - Civil and Environmental Engineering Design

Free Elective (3)
Technical Elective (3)

SS/Hum Elective (3)

## Total 13

## Total Credits Required 127/128

*Only one (EAR 203 or EAR 110) is required, the other must be SS/Hum Elective

## Computer Engineering, BS

## Program Director

## Qinru Qiu

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The Bachelor of Science in Computer Engineering (BSCE) program at Syracuse was originally established in 1969 through the former Department of Electrical Engineering and was the second such program of its kind in the nation. This program has been accredited by the Accreditation Board for Engineering and Technology (ABET) since 1973. Currently the BSCE program is housed in the Department of Electrical Engineering and Computer Science (EECS) which is a department in the College of Engineering and Computer Science (E\&CS).
Computer Engineering (CE) at Syracuse University has two primary foci: Computer Hardware Design: including an understanding of design methodologies for electronic circuits, digital systems, computer architecture and integrated circuits, and Computer Software Design: including an understanding of design methodologies for algorithms and data structures, operating systems, and a wide variety of software applications across various computer languages. In addition to design methodologies, test and verification principles are studied, as well as performance estimation
and the underlying computation theory. There is an excellent opportunity in laboratories to put the theory and design methods into practice by using digital components, design simulators, and microcontrollers.

Part of the department's mission is to enable CE graduates to use computer engineering and other knowledge to solve relevant societal problems as described by the BSCE Educational Objectives. This is accomplished by a rigorous curriculum that prepares students to achieve the BSCE Educational Outcomes prior to graduation and the BSCE Educational Objectives after graduation.

## Educational Objectives for the BSCE Program

The educational objective of the Bachelor of Science in Computer Engineering (BSCE) program in the Department of Electrical Engineering and Computer Science (EECS) at Syracuse University is to prepare well-rounded graduates that are ready for work and ready for change.

Well-rounded graduates of the BSCE program are known by their professional competence, innovative thinking, willingness to further enhance their education, ability to work individually and in diverse teams, leadership abilities, communication skills, and integrity.
Graduates of the BSCE program who are ready for work are engaged in applying the knowledge acquired in Computer Engineering, combined with their problem solving abilities, to produce feasible solutions to problems, in a timely manner, which are deemed important in industry, government, or academia.
Graduates of the BSCE program who are ready for change exhibit the intellectual flexibility necessary to solve new problems in innovative ways by integrating multiple viewpoints from several disciplines in search of the best possible solutions or applying their knowledge to different professional disciplines.
This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org

## Student Outcomes for the BSCE Program

In addition to successfully completing the requirements for the BSCE program which are described further on in this handbook, graduates from this program must also achieve the following educational outcomes prior to graduation:
an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as
well as to analyze and interpret data
an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
an ability to function on multidisciplinary teams
an ability to identify, formulate, and solve engineering problems
an understanding of professional and ethical responsibility
an ability to communicate effectively
the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
a recognition of the need for, and an ability to engage in life-Iong learning
a knowledge of contemporary issues
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
an ability to verify design correctness and evaluate performance of computing systems.

## BSCE Requirements

## Program Components

The BSCE program has four fundamental educational components: mathematics and sciences, engineering, social sciences and humanities, and general education. A liberal number of courses have been set-aside as electives in order to allow students, with the guidance of their advisors, to customize their education according to their personal and career objectives. A summary of required and elective credits within each component is as follows:

## Math and Science Education:

33 required, 0 elective; for a total of 33 credits;

## Engineering Education:

49 required, 18 elective; for a total of 67 credits;
General Education:
9 required, 12 elective; for a total of 21 credits;

## Social Science and Humanities Education:

3 required, 6 elective; for a total of 9 credits.

## Total Credits 130

## A Typical Program of Study Presented by Semester

First Year, Fall Semester
ECS 101 - Introduction to Engineering and Computer Science

ECS 102 - Introduction to Computing
MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
WRT 105 - Studio 1: Practices of Academic Writing

Total Credits: 17
First Year, Spring Semester
CSE 283 - Introduction to Object-Oriented Design
MAT 296 - Calculus II
PHI 251 - Logic
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
Social Science/Humanities elective 3 credits
Total Credits: 17

## Second Year, Fall Semester

CIS 375 - Introduction to Discrete Mathematics
CSE 384 - Systems Programming
CSE 489 - Web System Architecture and Programming

ELE 231 - Electrical Engineering Fundamentals I
ELE 291 - Electrical Engineering Laboratory I
MAT 331 - First Course in Linear Algebra
Total Credits: 16

## Second Year, Spring Semester

CSE 261 - Digital Logic Design
CSE 262 - Digital System Design and Simulation
CSE 382 - Algorithms \& Data Structures
ELE 232 - Electrical Engineering Fundamentals II
ELE 292 - Electrical Engineering Laboratory II
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
WRT 205 - Studio 2: Critical Research and Writing
Total Credits: 18

## Third Year, Fall Semester

CSE 381 - Computer Architecture
CSE 397 - FPGA and Microcontroller Design

Laboratory
CSE 484 - Introduction to Computer and Network Security

ECS 392 - Ethical Aspects of Engineering and Computer Science

Non-Eng./Comp. Science Electives 3 credits **
Social Science/Humanities elective 3 credits
Total Credits: 18

## Third Year, Spring Semester

CIS 321 - Introduction to Probability and Statistics *

CSE 398 - Embedded and Mobile Systems Laboratory

CSE 486 - Design of Operating Systems
Technical Electives 3 credits
Non-Eng./Comp. Science Elective 3 credits
Total Credits: 16

Fourth Year, Fall Semester
CSE 491 - Senior Design Project I
WRT 401 - Advanced Workshop in Technical Communications: Design Methodology
Technical electives 9 credits
Non-Eng./Comp. Science Electives 3 credits **
Total Credits: 15
Fourth Year, Spring Semester
CSE 492 - Senior Design Project II
WRT 402 - Advanced workshop in Technical Communication: Prototyping and Construction Technical electives 6 credits

Non-Eng./Comp. Science Electives 3 credits **
Total Credits: 13
Total Credits: 130
Note:
*CIS 321 can be waived if a student takes both MAT 521 and MAT 525.
**At least 6 of the 12 credits must be from the College of Arts \& Sciences.

## General Information

Note that you cannot take CIS 554-Object Oriented Programming in $\mathrm{C}++$, to fulfill any requirement in the Computer Engineering undergraduate program. This is because a considerable amount of material covered in this course overlaps with the material covered in the
core course CSE 283 - Introduction to ObjectOriented Design.

Note that CPS courses cannot be taken to fulfill any of the requirements for the Computer Engineering undergraduate program. These courses are designed for non-majors in Computer Engineering or in Computer Science.

## Elective Courses

## Technical Electives

Students fulfill 18 credits of technical electives. Out of the 18 credits, at least 6 of them must be selected from the Group A courses, which are yearly determined by the Computer Engineering Program Committee. For example, for the year 2015-2016, the following courses are in Group A.

CSE 400 - Selected Topics Web Communications Programming * or
CSE 483 - C\# and Windows Programming *
CSE 464 - Introduction to VLSI Design
CSE 561 - Digital Machine Design

## Note:

(*Only one of CSE 400 and CSE 483 will be considered as group A elective. If both are taken, the other one will be considered as a technical elective.)

## Remaining Technical Electives

The remaining technical electives can be selected from any CSE, CIS, or ELE courses, 300 -level or above, including courses offered under special topics.
Some examples are listed below:
ELE 331 - Digital Circuits and Systems
ELE 333 - Analog Circuits
ELE 346 - Semiconductor Devices
ELE 351 - System and Signal Analysis
CIS 352 - Programming Language: Theory \& Practice
ELE 424 - Fundamentals of Radio Frequencies and Microwaves

CIS 425 - Introduction to Computer Graphics
ELE 431 - Analog Circuits and Systems
CIS 453 - Software Specification and Design
CIS 454 - Software Implementation
CIS 467 - Introduction to Artificial Intelligence
CIS 473 - Automata and Computability
CIS 483 - Introduction to Computer and Network Security

CIS 500 - Selected Topics Programming in Java

## 5.0

CIS 543 - Control of Robots
CIS 581 - Concurrent Programming
CSE 400 - Selected Topics
CSE 458 - Data Networks: Basic Principles
CSE 581 - Introduction to Database Management Systems
CSE 588 - Translator Design

## Interdisciplinary (INT) Track

Objective: To allow students to have a more broad education by being able to take more courses outside of the Department of Electrical Engineering and Computer Science (EECS).

Requirements to complete this track:
Student must be awarded a minor or a second major in a discipline outside of the Department of Electrical Engineering and Computer Science (EECS), excluding a minor in Mathematics;

Student may substitute up to six credit hours of technical elective courses to fulfill this minor or second major, while still meeting the requirement that at least 6 credits are selected from the Group A courses.

The Computer Engineering Program Committee will determine if a specific CSE 591 course can be used to fulfill one of the tracks.

## Social Sciences and Humanities Electives

This 6-credit requirement may be fulfilled by any combination of courses whose contents are in the social science and humanities area. A glossary of course designations with such contents can be found in the Humanities Division and the Social Sciences Division of the College of Arts and Sciences with the exception of the following Anthropology - Physical courses: ANT 131, 331, ANT 431, 432, and ANT 433. These glossaries are given in The College of Arts and Sciences section of the Undergraduate Catalog.

## Non-Engineering/Computer Science Electives

The purpose of this 12-credit requirement of nonengineering/computer science elective courses is to provide students with a broad educational experience in a diversity of subjects. Out of the 12 credits, at least 6 credits have to be from the College or Arts and Sciences or contain the nature of Arts and Sciences. Moreover, technical courses offered by (or cross-listed with) the College of Engineering and Computer Science (ECS), courses with pass/fail grades, CPS courses, and 100-level courses in CHE, MAT, and PHY cannot be used to satisfy this requirement. IST courses will require
permissions from academic advisors.

## Minors

The Computer Engineering curriculum is flexible enough to allow a student to complete minors without taking additional credits or by taking only a few extra courses. Today's computer engineers work in an environment where they are expected to know not only computer hardware and software, but also material from a collection of other subject areas-from device technology or computer science to management and how computers affect the world. The computer engineering curriculum responds to this need by providing students with a strong basis in the fundamentals of computer engineering coupled with additional courses drawn from mathematics, electrical engineering and computer science. With the core courses in MAT and ELE, BSCE students normally are no more than 9 credits away from completing a minor in Electrical Engineering (ELE) or Mathematics (MAT).

## Computer Science, BS

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The mission of the computer and information science programs is to assist students to be ready for work and ready for change. This means preparing students to make professional contributions to computer and information science immediately upon graduation and throughout their professional careers, and to adapt to technological and societal changes.
The educational objective of the Bachelor of

Science in Computer Science (BSCS) program in the Department of Electrical Engineering and Computer Science (EECS) at Syracuse University are:

To prepare well-rounded graduates who are known by their professional competence, innovative thinking, ability to work individually and in diverse teams, leadership abilities, communication skills, and integrity.

To prepare well-rounded graduates who engage in applying the knowledge acquired in their major, combined with their problem solving abilities, to produce feasible solutions to problems, in a timely manner, which are deemed important in industry, government, or academia.
To prepare well-rounded graduates who exhibit the intellectual flexibility necessary to solve new problems in innovative ways by integrating multiple viewpoints from several disciplines in search of the best possible solutions.

This program is accredited by the Computing
Accreditation Commission of ABET, http://www. abet.org.

The programs in computer science prepare professionals who will adapt to constant changes in technology and who will be leaders in developing the new technologies of the Information Age. The multidisciplinary nature of the curricula offers students a high degree of flexibility to design a program of study tailored to their interests and professional aspirations.

Computer science focuses on programming, algorithms, large-scale software development, and the principles of computing that underlie these areas. Syracuse's program weaves together an emphasis on fundamental principles with new developments in computing, producing graduates prepared either to begin careers or to pursue advanced studies in the field.

With this degree you will learn about:
Computer and internet security
Artificial intelligence and machine learning to develop machines that can work among humans.

Operating system design to develop the next innovation to change Windows, Mac OS X and Unix or to invent a completely new operating system.

Innovative thinking so you can design programs that control rockets, future search engines, and cars that drive themselves.

Mathematics to reveal the limits of today's computers and explore the possibility of a new kind of computer that has yet to be imagined.
Problem solving, independent thinking and team collaboration in developing a largescale software systems with other computer
scientists and software engineers.
Graduates of the Syracuse University bachelor of science in computer science program achieve the following student outcomes:

Ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline. In particular, students should be able to apply this knowledge in a way that demonstrates comprehension of the tradeoffs involved in modeling, design and development of software systems of various scales and complexity.

Ability to analyze a problem, and identify and define computing requirements appropriate to its solution.

Ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.

Ability to function effectively on teams to accomplish common goals
Understanding of professional, ethical, legal, security, and social issues and responsibilities.
Ability to communicate effectively.
Ability to analyze the local and global impact to computing on individuals, organizations, and society.
Recognition of the need for lifelong learning and an ability to engage in the same.
Ability to use current techniques, skills, and tools necessary for computing practice.

Ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
Ability to apply design and development principles in the construction of software systems of varying complexity

## Distribution and Core <br> Requirements

The programs are divided into a general education section, a mathematics section, and a major section.

## General Education Section

Completion of the general education section requires at least 51 credits of coursework, as follows. Each student is required to complete 6 credits of writing (WRT 105, WRT 205) and 3 credits in presentational skills by taking at least one course out of the following:
CRS 225 - Public Advocacy
CRS 325 - Presentational Speaking

IST 444 - Information Reporting and Presentation

## Natural Sciences

The student is further required to complete 12 credits of natural sciences including

PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
(see exclusions in the Undergraduate Student Handbook)

## Additional Information

These 12 credits must include a two-semester sequence in a laboratory science.

## Social Science and Humanities

The student is required to complete 21 credits in social science and humanities ( $\mathrm{A} / \mathrm{SS} / \mathrm{H}$ ), including the following two courses:

## PHI 251 - Logic

ECS 392 - Ethical Aspects of Engineering and Computer Science

The remaining 15 credits may be chosen from courses offered by the College of Arts and Sciences or by the College of Visual and Performing Arts.

## Free Electives

Finally, each student has 9 credits of free electives. This requirement can be satisfied by any courses except for CPS courses intended for non-majors and certain remedial courses. A list of such courses can be obtained from the CIS program office.

## Mathematics Section

The mathematics section requires at least 15 credits of math. The student must take

MAT 295 - Calculus I
MAT 296 - Calculus II
MAT 397 - Calculus III or
MAT 331 - First Course in Linear Algebra
CIS 321 - Introduction to Probability and Statistics

## Engineering Courses

Students are also required to take
ECS 101 - Introduction to Engineering and Computer Science
ECS 102 - Introduction to Computing

## Major Section

The major section consists of ECS 101 Introduction to Engineering and Computer Science, ECS 102 - Introduction to Computing,
the 33-credit computer science core (listed below), and an 18-credit option in computer science.

## Computer Science Core

CIS 252 - Introduction to Computer Science
CIS 375 - Introduction to Discrete Mathematics
CIS 341 - Computer Organization \& Programming Systems
CIS 342 - Introduction to Systems Programming
CIS 351 - Data Structures
CIS 352 - Programming Language: Theory \& Practice

CIS 453 - Software Specification and Design
CIS 454 - Software Implementation
CIS 473 - Automata and Computability
CIS 477 - Introduction to Analysis of Algorithms
CIS 486 - Design of Operating Systems

## Academic Standards

Students are required to meet academic standards as follows: no grade below C- will satisfy the requirements for the 6 credits of writing, for the mathematics section, for the computer science core, and the 18 credits of upper-division technical electives. The computer science core must be completed with a B(2.667) average.

## Upper Division Technical Electives

The B.S. degree in computer science requires at least 123 credits, including satisfactory completion of the general education and mathematics sections; computer science core requirements; and 18 credits, with grades of C - or better, in upper division technical electives chosen from the following listing. At least 9 credits of the upper division technical electives must be in computer science.

## Arts and Sciences

PHI 378 - Minds and Machines
PHI 551 - Mathematical Logic
PHI 552 - Modal Logic

## Computer and Information Science

Students may also choose any mathematics courses numbered above 400, unless specifically excluded (i.e.,MAT 521 and MAT 485 as well as any CIS courses numbered above 300 , unless specifically excluded. The courses listed below are particularly recommended.

CIS 390 - Honors Seminar in Computer \&

Information Science
CIS 400 - Selected Topics
CIS 425 - Introduction to Computer Graphics
CIS 428 - Introduction to Cryptography
CIS 458 - Data Networks: Basic Principles
CIS 467 - Introduction to Artificial Intelligence
CIS 478 - Introduction to Quantum Computing
CIS 483 - Introduction to Computer and Network Security
CIS 543 - Control of Robots
CIS 545 - Introduction to Combinatorics
CIS 554 - Object Oriented Programming in C++

## Engineering

Students may also choose any computer engineering courses numbered above 300, unless specifically excluded. The courses listed below are particularly recommended.

CSE 397 - FPGA and Microcontroller Design Laboratory

CSE 398 - Embedded and Mobile Systems Laboratory
CSE 483 - C\# and Windows Programming
CSE 561 - Digital Machine Design
CSE 581 - Introduction to Database Management Systems

Representative Program of Study

## First Year, Fall Semester (16)

ECS 101 - Introduction to Engineering and Computer Science

ECS 102 - Introduction to Computing
MAT 295 - Calculus I
WRT 105 - Studio 1: Practices of Academic Writing

A/SS/H elective (3) *
First Year, Spring Semester (15)
CIS 252 - Introduction to Computer Science
MAT 296 - Calculus II
PHI 251 - Logic
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
Second Year, Fall Semester (13-
14)

CIS 375 - Introduction to Discrete Mathematics

A/SS/H elective (3)
CIS 351 - Data Structures
MAT 397 - Calculus III or
MAT 331 - First Course in Linear Algebra
Second Year, Spring Semester (17)
CIS 321 - Introduction to Probability and Statistics

CIS 341 - Computer Organization \& Programming Systems

CIS 342 - Introduction to Systems Programming
CIS 352 - Programming Language: Theory \& Practice

WRT 205 - Studio 2: Critical Research and Writing
Free elective (3)

## Third Year, Fall Semester (16)

CIS 453 - Software Specification and Design
CIS 477 - Introduction to Analysis of Algorithms
CIS 486 - Design of Operating Systems
Presentation Skills Elective (3)
Science elective (4)

## Third Year, Spring Semester (16)

CIS 473 - Automata and Computability
CIS 454 - Software Implementation
Upper-Division Elective (3)
A/SS/H Elective (3)
Science elective (4)

## Fourth Year, Fall Semester (15)

Upper-division course (3)
Upper-division course (3)
Upper-division elective (3)
ECS 392 - Ethical Aspects of Engineering and Computer Science

A/SS/H elective (3)

## Fourth Year, Spring Semester (15)

Upper-division course (3)
Upper-division course (3)
Free elective (3)
Free elective (3)
A/SS/H electives (3)

## Note:

*Students wishing to preserve the option of transferring to an engineering major at the end of the first semester should take CHE 106/CHE

107 in place of $\mathrm{A} / \mathrm{SS} / \mathrm{H}$ elective.

## Intra-University Transfer

Students who wish to transfer into any program within the College of Engineering and Computer Science from another school or college within the University should have a strong record of achievement and demonstrated success in key technical courses. Specifically, it is critical for the applicant to have proven their ability to excel in college-level calculus (by completing at least one of MAT 295, MAT 296, or MAT 397 with a grade of B - or better) and science (by completing at least one set of PHY 211/PHY 221 or CHE 106/ CHE 107 with a grade of B- or better). Students who wish to major in computer science must also complete CIS 252 with a grade of at least a B.

## Electrical Engineering, BS

## Program Director

## Prasanta K. Ghosh

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## Faculty

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The mission of the electrical engineering program is to promote learning in electrical engineering through integrated activities in teaching, research, scholarship, creative accomplishments, and service.

The educational objective of the bachelor of science in electrical engineering (BSEE) program in the Department of EECS at Syracuse University is to prepare well-rounded graduates that are ready for work and ready for change.
Well-rounded graduates of the BSEE program are known by their professional competence, innovative thinking, ability to work individually and in diverse teams, leadership abilities, communication skills, and integrity.

Graduates of the BSEE program who are ready for work are engaged in applying the knowledge acquired in their major, combined with their problem solving abilities, to produce feasible solutions to problems, in a timely manner, which are deemed important in industry, government, or academia.
Graduates of the BSEE program who are ready for change exhibit the intellectual flexibility necessary to solve new problems in innovative ways by integrating multiple viewpoints from several disciplines in search of the best possible solutions, or applying their knowledge to different professional disciplines.

Electrical engineering is based on scientific principles governing the motion of charged particles through conductors, semiconductors, or even a vacuum. These phenomena can be harnessed in a variety of applications such as in the treatment of disease, optical, satellite, and computer communications, power transmission, control of robots, radio and television broadcasting, and development of microelectronics for computers and analog circuits.

This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org.
Engineering design is taught in each of the four years of the electrical engineering program. Beginning with ECS 101 in the first year, students are required to formulate solutions to a variety of open-ended laboratory projects. As the students progress through their sophomore and junior years, the projects increase in complexity requiring additional creativity and knowledge. Finally, in the senior year the students are required to complete a major design project that builds upon their mastery of the fundamental concepts of mathematics, basic sciences, the humanities and social sciences, engineering topics, and communication skills.

In addition to successfully completing the requirements for the bachelor of science in electrical engineering, graduates from this program must also achieve the following student outcomes:
an ability to apply knowledge of mathematics and science.
an ability to design and conduct experiments, analyze and interpret data.
an ability to design systems to meet specifications.
an ability to function independently and in teams.
an ability to identify, formulate, and solve engineering and scientific problems.
an understanding of professional, ethical, and safety considerations.
an ability to communicate effectively, both orally and in writing.
an understanding of the role of science and engineering in society.
a recognition of the necessity of lifelong learning.
an understanding of contemporary issues through a broad liberal arts education.
an ability to use the modern tools necessary for professional practice.
an ability to think critically as evidenced by skills in interpretation, analysis, evaluation, and inference.

## Program Components

The electrical engineering program has four fundamental components: mathematics and sciences, engineering, social sciences and humanities, and general education. Within each component, a number of courses have been set aside as electives in order to allow students, with the guidance of their advisors, to customize their education according to personal and career objectives. A summary of required and elective credits within each component follows:

## Mathematics and Science

30 required, 3 elective, 33 total credits;

## Engineering

52 required, 12 elective, 64 total credits;

## Social Science and Humanities

3 required, 9 elective, 12 total credits;

## General Education

12 required, 6 elective, 18 total credits;

## Free

5 elective, 5 total credits;

## Overall

84 required, 48 elective, 132 total credits.

## Tracks (Technical Electives)

Tracks are intended to provide a cohesive set of technical electives for electrical engineering students. A track usually consists of a group of four courses (12 credits). In the Department of Electrical Engineering and Computer Science, there are three tracks in electrical engineering.

## Communications Track

ELE 351 - System and Signal Analysis
ELE 352 - Digital Signal Processing

And two of the following:<br>ELE 458 - Data Networks: Basic Principles<br>ELE 551 - Communication Systems<br>ELE 591 - Special Problems in Electrical Engineering<br>\section*{Electromagnetics Track}<br>ELE 324 - Electromagnetics I<br>ELE 325 - Electromagnetics II *<br>And two of the following:<br>ELE 424 - Fundamentals of Radio Frequencies and Microwaves<br>ELE 425 - Microwave Engineering<br>ELE 524 - Introduction to Applied Optics<br>ELE 525 - Elctromgetc Compatability<br>\section*{Power Track}<br>ELE 314 - Introduction to Power Engineering<br>ELE 324 - Electromagnetics I<br>\section*{And two of the following:}<br>ELE 400 - Selected Topics Power Electronics (3)<br>ELE 400 - Selected Topics Sensors and Measurements (3)<br>ELE 416 - Electromechanical Devices<br>ELE 514 - Electric Power Systems<br>ELE 591 - Special Problems in Electrical Engineering

## Note:

*Students who choose to complete a technical ECS minor may replace these courses (ELE 346, ELE 325) with technical electives.

## Elective Courses

In order to maximize the flexibility of the Electrical Engineering curriculum while maintaining its structure, electives have been divided into the following categories:

## Technical Electives

Tracks of specialization (listed below) and minors are (typically) used to regulate technical electives. Students must take 36 required course credits, and 18 technical elective credits.

Among the technical electives, each student must choose at least two from ELE 312 - Control Systems for MAE, ELE 352 - Digital Signal Processing, and ELE 325 - Electromagnetics II.

Each student must satisfy the requirements of a Track by taking at least one of the sets of technical electives listed below:

## 1. Communications Track:

ELE 352 - Digital Signal Processing
And two from
ELE 458 - Data Networks: Basic Principles
ELE 551 - Communication Systems
ELE 591 - Special Problems in Electrical Engineering

## 2. Electromagnetics Track:

Two from
ELE 424 - Fundamentals of Radio Frequencies and Microwaves

ELE 425 - Microwave Engineering
ELE 524 - Introduction to Applied Optics
ELE 525 - Elctromgetc Compatability

## 3. Power Track:

Two from
ELE 400 - Selected Topics
ELE 416 - Electromechanical Devices
ELE 514 - Electric Power Systems
ELE 591 - Special Problems in Electrical Engineering

## Mathematics and Sciences Elective

The 3 -credit elective may be fulfilled by any mathematics course with a calculus prerequisite, any physics course with a calculus-based physics prerequisite, or any college-level course in other science departments. By taking an appropriate math course, EE students can use this elective to complete a minor in mathematics.

## Social Sciences and Humanities Electives

This 9-credit requirement may be fulfilled by any combination of courses listed in the social sciences division or humanities division of the College of Arts and Sciences. A glossary of course designations with such contents can be found in the Humanities Division and the Social Sciences Division of the College of Arts and Sciences. Courses outside of this scope require prior approval from the academic advisors and Program Director.

## General Education Electives

This 6-credit requirement may be fulfilled by any combination of courses that do not have technical engineering, computer science, mathematics and natural science content. These courses, either by
themselves or in combination with social sciences and humanities electives and free electives, present a very attractive opportunity to complete one of the non-technical minors offered in the University.

## Free Electives

This 5-credit requirement may be fulfilled by any combination of college-level courses, for example, to help fulfill the requirements of a technical or a nontechnical minor.

## Program of Study

## First Year, Fall Semester (17)

ECS 101 - Introduction to Engineering and Computer Science

CHE 150 - General Chemistry for Engineers
MAT 295 - Calculus I
WRT 105 - Studio 1: Practices of Academic Writing

SS/H elective (3)

## First Year, Spring Semester (17)

ECS 102 - Introduction to Computing
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
SS/H elective (3)
Non-technical elective (3)

## Second Year, Fall Semester (16)

ECS 204 - Mathematical Programming for Engineers
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
ELE 231 - Electrical Engineering Fundamentals I
ELE 291 - Electrical Engineering Laboratory I
MAT 397 - Calculus III
SS/H elective (3)

## Second Year, Spring Semester (16)

MAT 485 - Differential Equations and Matrix Algebra for Engineers

WRT 205 - Studio 2: Critical Research and Writing
ELE 232 - Electrical Engineering Fundamentals II
ELE 292 - Electrical Engineering Laboratory II
ELE 346 - Semiconductor Devices *
CSE 261 - Digital Logic Design
Third Year, Fall Semester (18)ELE 331 - Digital Circuits and SystemsELE 391 - Digital Circuits LaboratoryELE 351 - System and Signal AnalysisELE 324 - Electromagnetics IMAT 521 - Introduction to Probability $\dagger$WRT 307 - Advanced Writing Studio: ProfessionalWriting
Third Year, Spring Semester (17)
ELE 314 - Introduction to Power Engineering *
ELE 333 - Analog Circuits
ELE 392 - Analog Circuits Laboratory
Free elective (2)
Select two of the following three courses:
ELE 352 - Digital Signal Processing
ELE 312 - Control Systems for MAE *
ELE 424 - Fundamentals of Radio Frequenciesand Microwaves
Fourth Year, Fall Semester (14)
WRT 401 - Advanced Workshop in TechnicalCommunications: Design Methodology
WRT 402 - Advanced workshop in TechnicalCommunication: Prototyping and Construction
ELE 491 - Senior Design Project I
Technical elective (6)
ECS 392 - Ethical Aspects of Engineering andComputer Science
Fourth Year, Spring Semester (17)
ELE 492 - Senior Design Project II
Technical elective (6)
Math/Science elective (3)
Non-technical elective (3)
Free elective (3)
Total 132
Note:
*These courses may be replaced with technicalelectives by students who choose to complete anECS technical minor.
†CIS 321 - Introduction to Probability and Statistics (4 credits) can be substituted if a student does not want a mathematics minor.

## Minors

The electrical engineering curriculum is flexible enough to allow a student to complete up to three minors. Today's engineers work in an environment where they are expected to know not only their specialty areas, but also a collection of other subject areas-from computers to finance. The EE curriculum responds to this need by providing students with a strong basis in the fundamentals of electrical engineering, coupled with an opportunity to broaden the scope of their education. An electrical engineering student may complete one or all of the following types of minors within the normal limits of the curriculum.

## Engineering and computer science minor

A student who wishes to complete a technical minor offered by the college has up to 26 credits of electives distributed from the second year through the fourth year. Twelve of those credits are labeled as technical electives in the following curriculum. Nine of them are credits from the three courses marked by an asterisk, ELE 346, ELE 325, and ELE 312, which are not required for students who choose to complete an ECS technical minor. The remaining 5 credits are from free electives.

## Non-technical minor

A student who would like to complete a nontechnical minor has 9 credits of social sciences and humanities electives and 5 credits of free electives in addition to 9 credits of general education electives, which can be used toward any one of more than 70 minors offered at Syracuse University.

## Minor in mathematics

Electrical engineering curriculum requires students to take 18 credits of courses from the mathematics department. With the 3 -credit mathematics and sciences elective course also taken appropriately from that department, a minor in mathematics can be earned.

## Environmental Engineering, BS

## Department Chair:

Dr. Ossama "Sam" Salem, 151 Link Hall, omsalem@syr.edu, 315-443-2311

## Program Director:

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## Environmental Engineering Faculty

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The mission of the Civil and Environmental Engineering Department is to promote learning and the creation, dissemination, and application of knowledge in civil and environmental engineering through integration of teaching, scholarship, and service.

The goal of the Civil and Environmental Engineering Department is to prepare students for engineering practice, advanced study, and lifelong learning in civil and environmental engineering. Graduates are expected to be proficient in the fundamentals of sustainable engineering analysis and design and understand the importance and methods of effective communication. Students are encouraged to use the extensive international network and educational resources of Syracuse University and the Syracuse community to broaden and enhance the quality of their university education.

The educational objectives of the environmental engineering program are to produce graduates who:
can apply technical knowledge and problemsolving skills to advance their careers and serve the community;
are prepared for engineering practice and advanced studies in environmental engineering;
will engage in life-long learning to keep themselves abreast of new developments in their fields of practice or study; and
are capable of effective written and oral communications.

Our student outcomes are in line with those identified by the Engineering Accreditation Commission of ABET. At the time of their graduation, our students should have acquired: an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as well as to analyze and interpret data
an ability to design a system, component, or process to meet desired needs within realistic constraints
an ability to function on multi-disciplinary teams
an ability to identify, formulate, and solve engineering problems
an understanding of professional and ethical responsibility
an ability to communicate effectively
the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
a recognition of the need for, and an ability to engage in life-long learning
a knowledge of contemporary issues
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

## Environmental Engineering Description

The B.S. degree program in environmental engineering emphasizes the application of engineering and science principles to the preservation and management of the environment. It provides a strong background in the basic and engineering sciences and a variety of courses in several environmental areas, including water and wastewater treatment, solid and hazardous waste management, air pollution control, transport and fate of pollutants, and environmental chemistry and microbiology. The program allows students to pursue a series of elective courses suited to individual interests and goals, as well as to obtain minors in a variety of subject areas. Doublemajors with geography, economics, political science and policy studies are possible without any additional coursework.
This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org.
Adjustments in the program can be made to accommodate transfer students from accredited two- and four-year institutions so they may develop their programs of study as soon as possible after admission.

## Environmental Engineering Curriculum

## First Year, Fall Semester

MAT 295 - Calculus I
CHE 106 - General Chemistry Lecture I
CHE 107 - General Chemistry Laboratory I
ECS 101 - Introduction to Engineering and Computer Science

WRT 105 - Studio 1: Practices of Academic Writing

SS/Hum Elective (3)

## Total 17

First Year, Spring Semester
MAT 296 - Calculus II
CHE 116 - General Chemistry Lecture II
CHE 117 - General Chemistry Laboratory II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
SS/Hum Elective (3)
Total 15

## Second Year, Fall Semester

MAT 397 - Calculus III
ECS 221 - Statics
EAR 110 - Dynamic Earth or SS/Hum Elective (3)*

SS/Hum Elective (3)
SS/Hum Elective (3)
Total 16/17
Second Year, Spring Semester
MAT 485 - Differential Equations and Matrix Algebra for Engineers
ECS 325 - Mechanics of Solids
EAR 203 - Earth System Science or SS/Hum Elective (3)*
CIE 274 - Sustainability in Civil and Environmental Systems

WRT 205 - Studio 2: Critical Research and Writing
Total 16/17
Third Year, Fall Semester
CIE 327 - Prin of Fluid Mechanics
CIE 337 - Introduction to Geotechnical Engineering

CIE 341 - Introduction to Environmental Engineering
SS/Hum Elective (3)
Free Elective (3)
Total 17
Third Year, Spring Semester
CIE 329 - Probability, Statistics and Risk for Civil and Environmental Engineering
CIE 352 - Water Resources Engineering
GEO 383 - Geographic Information Systems
Professional Elective (3)

Select one of the following courses
(3/4):
CIE 326 - Engineering Materials
ECS 222 - Dynamics
ELE 231 - Electrical Engineering Fundamentals I
MAE 251 - Thermodynamics
CHE 346 - Physical Chemistry
Total 18/19

## Fourth Year, Fall Semester

CIE 471 - Environmental Chemistry and Analysis
CIE 472 - Applied Env Microbiology
CIE 442 - Treatment Processes in Environmental Engineering
GNE 461 - Air Pollution Engineering
Professional Elective (3)
Total 16

## Fourth Year, Spring Semester

CIE 475 - Civil and Environmental Engineering Design
Professional Elective (3)
Technical Elective (3)
Technical Elective (3)
Total 13

## Total Credits Required 129/130

*Only one (EAR 203 or EAR 110) is required, the other must be SS/Hum Elective

Mechanical Engineering, BS

## Department Chair:

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## Program Director:

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## Faculty

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## Roy, Jianshun S. Zhang

The mission of the mechanical engineering program at Syracuse University is to educate and promote learning and discovery in mechanical engineering and to prepare students for careers of technical excellence, professional growth, and leadership in a complex and competitive technological environment.

The educational objectives of the mechanical engineering curriculum are to enable graduates of the program to do the following:
apply the physical, mathematical, and engineering sciences to professional practice or to advanced study in mechanical engineering or related fields;
be cognizant of societal context and ethical responsibility in professional practice;
function productively on teams and communicate ideas to both technical and non-technical audiences; and
be agile, innovative, and adaptable in an increasingly diverse and global environment

In order to meet the demands of new and existing high-tech industries, we prepare our students by providing opportunities to gain marketable and relevant skills that can lead to success in a wide range of careers. The distinctive signature of undergraduate mechanical engineering at Syracuse University is its strong technical core coupled with the ability to fit either a technical or a non-technical minor into the curricula. Students explore the breadth of Syracuse University by complementing their mechanical engineering degree with a minor in business, public policy, fine arts, public communications, and many more.
Mechanical engineering is a broad discipline concerned with the design and analysis of systems that produce or modify motion, force, and energy into forms useful to people. Mechanical engineers are employed throughout the complete spectrum of industries, including automotive, industrial machinery, publishing and printing, electrical and thermal power, chemical processing, textile, petroleum, computer and electronic, pharmaceutical, apparel, consumer products, soap and cosmetics, paper and wood products, rubber, and glass.

Driven by the breadth of career paths open to mechanical engineering graduates, the B.S. program in mechanical engineering (MEE) is structured to provide a firm educational foundation in the physical, mathematical, and engineering principles and design practices relevant to mechanical and thermal systems. The program is designed to prepare graduates for either immediate employment or for continuing studies at the graduate level.
Requirements for the B.S. MEE program appear below. For the first five semesters the
recommended sequence of courses for the B.S. MEE program is very similar to the recommended program for the degree B.S. in aerospace engineering (AEE), which demonstrates the complementary nature of the two disciplines. Courses carrying the prefix MAE indicate that class material and assignments are drawn from both aerospace and mechanical engineering applications.
Beginning in the sixth semester students who follow the B.S. MEE program begin to take courses addressing engineering topics unique to mechanical engineering, including machine design and manufacturing and heat transfer. The last three semesters of the MEE program also include courses of more broad applications, including dynamics of mechanical systems and linear control systems.

Experience with open-ended design problems is obtained in a sequence of courses that span the entire curriculum. The sequence begins with introductory design experiences in the first-year courses ECS 101 and MAE 184.
Upper-division courses involving design include courses in machine design and manufacturing, and senior capstone design. The two-semester capstone design experience (MEE 471, MEE 472) requires students to integrate knowledge from all areas in the design of a complete product or system.

The B.S. MEE curriculum allows for programs of study that can be tailored by students to take advantage of the diversity of strengths across both ECS and all of Syracuse University. We provide engineering students with opportunities to complete minors in areas that can complement technical knowledge-such as international affairs, business, and public policy-thus enhancing the value and attractiveness of a Syracuse University engineering education. Students can also elect to pursue a University minor or take a distribution of electives, which will include liberal arts classes, free electives, and additional depth in mechanical engineering. There are a total of 27 elective credits ( 9 electives) in the B.S. MEE program; one of these electives ( 3 credits) must be in Social Sciences/Humanities (SS/H); two (6 credits) must be MAE technical electives, one of which must be either MAE 430, MAE 571, or MAE 573. The remaining 18 credits can be customized for each student in either of two ways:
A University Minor, typically 18 credits coordinated by the offering department; The minor must have fewer than 12 credits of overlap with required MEE courses.

A Distribution of Electives, including:
at least 6 credits of $\mathrm{SS} / \mathrm{H}$
at least 9 credits of technical electives
one 3 -credit free elective.

MEE students seeking to complete a Mathematics Minor can take a mathematics course as a free elective but must still complete one of the 2 options listed above.
MEE students seeking to complete the Energy Systems Minor ( 15 credits) must take an additional 3-credit SS/H course.
Technical Electives are courses at the 300 level or higher taken within the Mechanical and Aerospace Engineering (MAE) Department. Selected courses from other ECS departments, mathematics, or natural sciences may be accepted as technical electives, but no more than 3 credit hours of technical electives can be taken outside the MAE department.
Students are strongly encouraged to develop a plan for selections of their electives during their first year. The planning process should include discussions with the student's academic advisor, other faculty members, and peer advisers. The MAE department offers most undergraduate technical elective courses on a two-year cycle. As a result, it may be necessary for a student to modify the sequence of courses recommended below to accommodate a technical elective course of personal interest.
In addition to successfully completing the requirements for the mechanical engineering program, graduates from this program must also achieve the following student outcomes:
an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as well as to analyze and interpret data
an ability to design a system, component, or process to meet desired needs including both thermal and mechanical systems
an ability to function on multidisciplinary teams
an ability to identify, formulate, and solve engineering problems
an understanding of professional and ethical responsibility
an ability to communicate effectively
the broad education necessary to understand the impact of engineering solutions in a global and societal context
a recognition of the need for, and an ability to engage in life-long learning
a knowledge of contemporary issues
an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
a familiarity with statistics and linear algebra and the ability to apply advanced mathematics through multivariate calculus and differential equations

## UNDERGRADUATE COURSE CATALOG

This program is accredited by the Engineering Accreditation Commission of ABET, http://www. abet.org.

Mechanical Engineering Requirements

First Year, Fall Semester
ECS 101 - Introduction to Engineering and Computer Science
MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
WRT 105 - Studio 1: Practices of Academic Writing

ECN 203 - Economic Ideas and Issues
Total 17

## First Year, Spring Semester

MAE 184 - Engineering Graphics and ComputerAided Design

ECS 104 - Engineering Computational Tools
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
Elective \#1 (SS/H) (3)
Total 17

## Second Year, Fall Semester

ELE 231 - Electrical Engineering Fundamentals I
ELE 291 - Electrical Engineering Laboratory I
MAT 397 - Calculus III
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
ECS 221 - Statics
Elective \#2 (3)
Total 18
Second Year, Spring Semester
MAE 251 - Thermodynamics
ECS 222 - Dynamics
ECS 325 - Mechanics of Solids
MAT 485 - Differential Equations and Matrix Algebra for Engineers

Elective \#3 (Technical) (3)
Total 17
Third Year, Fall Semester

ECS 326 - Engineering Materials, Properties, and Processing

MAE 341 - Fluid Mechanics
MAE 312 - Engineering Analysis
MAE 315 - Mechanical and Aerospace Engineering Laboratory

Elective \#4 (3)
Total 16
Third Year, Spring Semester
MAE 355 - Fundamentals of Heat Transfer
MEE 332 - Introduction to Machine Design and Manufacturing

MAE 321 - Dynamics of Mechanical Systems
ELE 312 - Control Systems for MAE
Elective \#5 (3)
Total 16
Fourth Year, Fall Semester
MEE 471 - Synthesis of Mechanical Systems I
MEE 416 - Mechanical Engineering Laboratory
MEE 431 - Manufacturing Processes
Elective \#6 (3)
Elective \#7 (3)
Total 15
Fourth Year, Spring Semester
MEE 472 - Synthesis of Mechanical Systems II
WRT 205 - Studio 2: Critical Research and Writing
Elective \#8 (3)
Elective \#9 (3)
Total 12

## Other

GPA: 2.0 (All students must earn a minimum cumulative GPA of 2.00 and at least 2.00 GPA in all math, science and engineering courses in order to be awarded an SU degree.)

## Note:

Do not repeat prerequisites for admission into the major.

Total 128
Recommended Technical Electives

AEE 342 - Aerodynamics
AEE 343 - Compressible Flow
AEE 427 - Aircraft Performance and Dynamics
AEE 446 - Propulsion
AEE 577 - Introduction to Space Flight
ECS 511 - Sustainable Manufacturing
ECS 526 - Statistics for Engineers
MAE 430 - Introduction to Design Optimization
MAE 457 - Automotive Engineering for ECS Students

MAE 486 - Fuel Cell Science and Technology
MAE 536 - Composite Materials
MAE 545 - Applications of Fluid Mechanics
MAE 548 - Engineering Economics and Technology Valuation

MAE 551 - Energy Conversion
MAE 553 - HVAC Systems Analysis and Design
MAE 554 - Principles of Refrigeration
MAE 571 - Applications of Computational Fluid Dynamics

MAE 573 - Application of Finite Element Analysis
MAE 585 - Principles of Turbomachines
MAE 587 - Design of Solar Energy System
MAE 588 - Principles of Wind Turbines
MEE 571 - Computer Aided Design
MFE 326 - Probability and Statistical Methods for Engineers
NUC 301 - Introduction to Nuclear Engineering and Reactor Safety

NUC 510 - Nuclear Reactor Design, Operation and Safety

## Systems and Information Science, BS

Systems and Information Science

## Program Directors:

David Dischiave, 225 Hinds Hall, 315-443-4681, ddischia@syr.edu

Robert J. Irwin, 4-206L-A Center for Science and Technology, 315-443-4400, rjirwin@syr.edu

## Faculty:

Thomas Barnard, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Jun Hwan (Brandon) Choi, Wenliang (Kevin) Du, Sara Eftekharnejad,

Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Jennifer Graham, Mustafa Cenk Gursoy, Robert Irwin, Can Isik, Andrew ChungYeung Lee, Jay Kyoon Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Vir Phoha, Qinru Qiu, James S. Royer, Jeffrey Saltz, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Sucheta Soundarajan, Jian Tang, Yuzhe (Richard) Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Li Wang, Hong Wang, Yanzhi Wang, Heng Yin, Edmund Yu, Reza Zafarani

## What is Systems and Information Science?

In essence, students in the SIS program learn what they can do with computers and how best to do it. As the name implies, the focus is on information and how it can be stored, manipulated and retrieved. Implementation of large-scale software systems and working with a group of people in achieving such goals are emphasized in the SIS program.

## SIS at Syracuse University

Systems and Information Science (SIS) integrates software and systems knowledge with expertise in business enterprise environment. SIS majors gain hands-on experience in design-oriented laboratories and learn about the social, business and organizational aspects of digital information systems.

## Curriculum:

The SIS program requires a total of 120 credits, as follows:

32 credits SIS Core
24 credits SIS Sequences
13 credits Mathematical Foundations
9 credits Communication Skills
39 credits Arts \& Sciences
3 credits Free Electives
In the descriptions that follow, all courses are three credits unless otherwise indicated.

## I. SIS Core (32 Credits)

SIS 101 - SIS Freshman Forum
Information Management Core (9 credits)
IST 335 - Introduction to Information-Based Organizations

IST 352 - Information Analysis of Organizational Systems

IST 445 - Managing Information Systems Projects

## Computing Core (20 credits)

ECS 102 - Introduction to Computing
CIS 252 - Introduction to Computer Science
CIS 351 - Data Structures
CIS 386 - Principles of Computer System Design
CIS 453 - Software Specification and Design
CIS 454 - Software Implementation

## II. Mathematical Foundations (13 credits)

MAT 194 - Precalculus
PHI 251 - Logic
CIS 375 - Introduction to Discrete Mathematics
CIS 223 - Statistical Reasoning and Practice

## II. SIS Sequences ( 24 Credits)

All SIS students must complete both a Short Technical Sequence ( 6 credits) and a Focus Area (18 credits).
The Technical Sequence requires a two-course sequence in one of several applied-technology areas: Database Management, Networking, Security Management, Systems, and Web Design and Management.

The Focus Area requires 18 credits in a specific domain, which represents a potential area for the application of a student's informating management and computing skills.

Students may not count the same course towards both their Technical Sequence and their Focus Area.

For details of the Technical Sequence and the Focus Areas, please consult the SIS Program Directors.

## IV. Communication Skills (9 credits)

The Communication Skills requirement provides both writing and presentation experience.

WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
And one of the following:
CRS 325 - Presentational Speaking
IST 444 - Information Reporting and Presentation
V. Arts \& Sciences (39 credits)

Students must take 39 credits of courses from the College of Arts \& Sciences and/or the College of Visual and Performing Arts. Specifically, these credits must be distributed as follows:

## 6 credits Humanities

6 credits Social Sciences
6 credits Natural Sciences \& Mathematics
21 credits of any courses from the above A\&S divisions or VPA

## Note:

NYS Department of Education requires half of the credits for a B.S. degree to be in the liberal arts and sciences. These 39 credits-combined with the Communication Skills and Mathematical Foundations- exceed the necessary 60 credits.

A student's Focus Area (e.g., a minor in history) may contain courses that satisfy the NYS requirement for liberal-arts content. In such a case, the remaining credits become free electives.

## VI. Free Electives (3 credits)

A student has 3 credits of free electives. Any course in the University can be used to satisfy this requirement.

## Sample Four-Year Course Flow:

The following shows a fairly typical SIS undergraduate program for a student who arrives with no transfer credits. All courses are 3 credits unless otherwise indicated.

## First Year

## Fall Semester

SIS 101 - SIS Freshman Forum
ECS 102 - Introduction to Computing
MAT 194 - Precalculus
WRT 105 - Studio 1: Practices of Academic Writing
A\&S Elective
Total credits: 16

## Spring Semester

CIS 252 - Introduction to Computer Science
PHI 251 - Logic
A\&S Elective
A\&S Elective
A\&S Elective
Total credits: 16

| Second Year | Total credits: 15 |
| :---: | :---: |
| Fall Semester | Spring Semester |
| CIS 375 - Introduction to Discrete Mathematics | CIS 454 - Software Implementation |
| CIS 351 - Data Structures | Focus Area course |
| IST 335 - Introduction to Information-Based Organizations | A\&S elective |
|  | A\&S elective |
| A\&S elective |  |
| free elective | Total credits: 12 |
| Total credits: 16 | Minor |
| Spring Semester | Computer Engineering Minor |
| CIS 223 |  |
| WRT 205 - Studio 2: Critical Research and Writing | Minor Coordinator |
| IST 352 - Information Analysis of Organizational Systems | $\begin{aligned} & \text { Qinru Qiu } \\ & \text { 4-206 Center for Science and Technology } \end{aligned}$ |
| Focus Area course | 315-443-1836 <br> qiqiu@syr.edu. |
| A\&S elective | The minor in Computer Engineering requires a |
| Total credits: 15 | minimum of 18 credit hours, 12 of which must be in 300 to 400 -level coursework. |
| Third Year |  |
| Fall Semester | The minor in computer engineering (18 credits) must |
| CIS 386 - Principles of Computer System Design | include the following courses: |
| IST 445 - Managing Information Systems Projects | CSE 261 - Digital Logic Design |
| Short Technical Sequence course | CSE 283 - Introduction to Object-Oriented Design |
| Focus Area course | CSE 382 - Algorithms \& Data Structures |
| A\&S elective |  |
| Total credits: 15 | - Plus 9 credits from any CSE courses 300-level or above |
| Spring Semester CRS 325 - Presentational Speaking or | Plus 9 credits from any CSE courses 300-level or above. Examples are: CSE 381 , CSE 384 , CSE 464 , CSE 483 , CSE 484, CSE 489 |
| IST 444 - Information Reporting and Presentation |  |
| Short Technical Sequence course | Computer Science Minor |
| Focus Area course | Minor Coordinator |
| A\&S elective | Minor Coordin |
| A\&S elective | Susan Older <br> 4-181 Center for Science and Technology |
| Total credits: 15 | 315-443-4679 <br> sueo@ecs.syr.edu |
| Fourth Year |  |
|  | Minor Requirements |
| Fall Semester | The minor in computer science requires the |
| CIS 453 - Software Specification and Design | completion of at least 18 credits in CIS courses |
| Focus Area course | with an overall grade point average of at least 2.5 , and with no individual course grade below C -. |
| Focus Area course | These 18 hours must include |
| A\&S elective | CIS 252 - Introduction to Computer Science |
| $A \& S$ elective | CIS 375 - Introduction to Discrete Mathematics |

CIS 351 - Data Structures

## And at least one course chosen from <br> CIS 352 - Programming Language: Theory \&

 PracticeCIS 473 - Automata and Computability
CIS 477 - Introduction to Analysis of Algorithms

## Additional Information

At least 12 credits must come from courses numbered 300 or greater. All courses must be intended for CIS majors.

## Electrical Engineering Minor

## Minor Coordinator

Prasanta K. Ghosh, 4-131 Center for Science and Technology, 351-443-4440, pkghosh@syr.edu.

## Academic Requirements

The minor in electrical engineering (EE) (20 credits) is available to any Syracuse University student who has the appropriate prerequisites such as calculus and calculus-based physics. Students must complete 8 credits of required sophomore courses shown below and 12 credits of junior- or senior-level elective courses offered by the electrical engineering program. Students may choose the elective courses to give them a breadth of coverage or complete a track* in a specific concentration area as described in the catalog.

ELE 231 - Electrical Engineering Fundamentals I
ELE 291 - Electrical Engineering Laboratory I
ELE 232 - Electrical Engineering Fundamentals II
ELE 292 - Electrical Engineering Laboratory II
ELE EE Junior or senior courses (12)
Total 20

## Note:

*Tracks are intended to provide a cohesive set of technical electives for EE students. A track consists of a sequence of two senior-level elective courses and their appropriate prerequisites. The current examples of tracks in EE are all 12 credits. More information can be found in the EE curriculum description.

## Energy Systems Minor

## Minor Coordinator

Dr. Ezzat Khalifa, 263 Link Hall, 315-443-2341, hekhalif@syr.edu.
This minor option will provide students enrolled within the College of Engineering and Computer Science with a grouping of courses/electives that will provide academic depth in the field of energy related systems in 4 different but related tracks.

Admission to the energy systems minor is by permission of an academic advisor and requires students to be enrolled in a B.S. program in Engineering within the College of Engineering and Computer Science.

Students with sufficient technical background from other Syracuse University Academic Units may be considered for admission to the Minor in Energy Systems and such decisions will be made by the E\&CS Energy Systems Committee.

## Course Requirements

The following courses must be taken by all students within the minor regardless of the specific track:

ECN 203 - Economic Ideas and Issues
MAE 251 - Thermodynamics or
CEN 252 - Chemical Engineering Thermodynamics I

MAE 548 - Engineering Economics and Technology Valuation
MAE 551 - Energy Conversion

## Track-Specific Courses

In addition, 3 track-specific courses must be taken from a list of required and elective courses for each of the 4 individual tracks. These 4 track specific lists are available from an academic advisor.

## 1. Thermo-Mechanical Energy Systems Track

Select any 2 of the following courses, plus 1 elective from any of the 4 Energy Systems Tracks:
MAE 553 - HVAC Systems Analysis and Design
MAE 554 - Principles of Refrigeration
MAE 585 - Principles of Turbomachines
MAE 457 - Automotive Engineering for ECS Students

AEE 446 - Propulsion

## 2. Nuclear Energy Track

Required:

NUC 301 - Introduction to Nuclear Engineering and Reactor Safety

Select either
NUC 510 - Nuclear Reactor Design, Operation and Safety
NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation

Plus 1 of the remaining NUC Electives, or 1
Elective from any other Energy Systems Track:
NUC 510 - Nuclear Reactor Design, Operation and Safety
NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation
NUC 530 - Electric Power Generation and Distribution

NUC 540 - Experiential Studies in Nuclear Technology
Others to be announced

## 3. Renewable Energy Track

Select any 2 of the following, plus
1 elective from any of the 4 energy
Systems Tacks:
CEN 400 - Selected Topics Energy Materials
CEN 462 - Biofuels, Bioproducts, and Biorefining or

CEN 551 - Biochemical Engineering
MAE 486 - Fuel Cell Science and Technology
MAE 587 - Design of Solar Energy System
MAE 588 - Principles of Wind Turbines
PHY 305 - Solar Energy Science and Architectures
Others to be announced

## 4. Electric Power Track

Select any 3 electives from the following list:

ELE 324 - Electromagnetics I
ELE 416 - Electromechanical Devices
ELE 514 - Electric Power Systems
ELE 530 - Electric Power Generation and Distribution

Others to be announced
Engineering and Computer Science Management Minor

Minor Coordinator Engineering
Frederick Carranti, 247 Link Hall, 315-443-4346, carranti@syr.edu.

## Minor Coordinator Management

Rachel DuBois, 415 Whitman School of Management, 315-443-9609, rdubois@syr.edu.

This minor is designed to provide EC\&S students with a relevant non-technical minor. It is open to all SU students with approval of their home college.

## The requirements are

ECS 391 - Legal Aspects of Engineering and Computer Science
ECS 392 - Ethical Aspects of Engineering and Computer Science

Two upper-level management courses selected from the following:
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

EEE 382 - Entrepreneurial Marketing
EEE 451 - Finance for Emerging Enterprises
FIN 301 - Essentials of Finance
LPP 458 - Environmental Law and Public Policy

## Two courses selected from the

 following:ACC 201 - Essentials of Accounting
ECN 203 - Economic Ideas and Issues
MAR 301 - Essentials of Marketing

## Combined Degree

Aerospace Engineering/
Business Administration (3-2
Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 128 credits for the Bachelor of Science in Aerospace Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Bioengineering, $\mathrm{BS} / \mathrm{MS}$

## Combined Degree Program

## Contact

Radhakrishna Sureshkumar, Biomedical \& Chemical Engineering Department Chair 329 Link Hall, 315-443-1931, rsureshk@syr.edu James H. Henderson , Graduate Program Director 303 F Bowne Hall, 443-9739, jhhender@syr.edu Andrew Darling, Undergraduate Program Director 361 Link Hall, 443-4848, andarlin@syr.edu

## Faculty

Rebecca A. Bader, Jesse Q. Bond, Katie D. Cadwell, Ruth Chen, Andrew L. Darling, Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, George C. Martin, Patrick T. Mather, Shikha Nangia, Dacheng Ren, Ashok Sangani, Pranav Soman, Radhakrishna Sureshkumar, Lawrence L. Tavlarides

## Description

The combined degree is for students to complete the Bachelor of Science in Bioengineering and the Masters of Science in Bioengineering degrees consecutively, with a goal of completing both degree requirements in five years. 6 credits of 500-level courses may be counted towards both Bachelor's and Master's degrees. A block of transfer credits labeled as "transferred from SU undergraduate record" appears on the graduate record and applies credit hours toward the graduate degree, but is not calculated in the graduate GPA. The proposed curriculum is compatible with either the non-thesis plan or thesis plan for the Master's degree, with the non-thesis option considered the default. If the student elects the thesis plan, 6 thesis credits will replace 3 credits of BEN graduate technical electives and 3 credits of engineering/math/ science graduate electives.

## Admission

Students must be currently enrolled in the BS bioengineering program at Syracuse University, and should apply to the combined BS and MS program in the first semester of their third year of study. Admission is based upon academic performance. Students are accepted for graduate study after completion of the third year of study but are not fully matriculated as graduate students until all bachelor's degree requirements have been met.

## Bioengineering/Business Administration, BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 130 credits for the Bachelor of Science in Bioengineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work
experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Chemical Engineering, BS/MS

## Combined Degree Program

## Contact

Radhakrishna Sureshkumar, Biomedical \& Chemical Engineering Department Chair 329 Link Hall, 315-443-1931, rsureshk@syr.edu
Dacheng Ren, Chemical Engineering Graduate Program Director
357 Link Hall, 443-4409, dren@syr.edu
Katie Cadwell, Chemical Engineering
Undergraduate Program Director
341 Link Hall, 443-4756, kdcadwel@syr.edu

## Faculty

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Ruth Chen, Andrew L. Darling, Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, George C. Martin, Patrick T. Mather, Shikha Nangia, Dacheng Ren, Ashok Sangani, Pranav Soman, Lawrence L. Tavlarides, Radhakrishna Sureshkumar

## Description

The combined degree program is offered for the student who wants to complete consecutively the Bachelor of Science and Master of Science degrees in Chemical Engineering. The combined degree program is designed to be completed in five years, with the student taking two graduate courses in the senior year. Up to 6 credit hours may be counted towards both the bachelor's and the master's degrees. A block of transfer credits labeled as "transferred from SU undergraduate record" appears on the graduate record and applies credit hours toward the graduate degree, but is not calculated in the graduate GPA. Graduate courses taken in the fourth year of study not required for completion of the bachelor's degree are included in the undergraduate tuition but appear only on the graduate record, and grades calculate only toward the graduate GPA.

## Admission

Students must be currently enrolled in the BS chemical engineering program at Syracuse University, and should apply to the combined BS and MS program in the first semester of their third year of study. Admission is based upon academic performance. Students are accepted for graduate study after completion of the third year of study but are not fully matriculated as graduate students until all bachelor's degree requirements have been met.

## Chemical Engineering/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu
Students will complete 128 credits for the Bachelor of Science in Chemical Engineering degree and an additional 54 credits for the MBA degree.

3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Civil Engineering/Business Administration (3-2 Program), BS/MBA

## Contact:

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

> Students will complete 128 credits for the Bachelor of Science in Civil Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will
complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Computer Engineering, BS/MS

## Contact:

Qinru Qiu, Program Director, 4-133 Center for Science and Technology, 315-443-1836, Fax 315-443-2583; qiqiu@syr.edu

## Faculty

Thomas Barnard, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Jun Hwan (Brandon) Choi, Wenliang (Kevin) Du, Sara Eftekharnejad, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Jennifer Graham, Mustafa Cenk Gursoy, Robert Irwin, Can Isik, Andrew ChungYeung Lee, Jay Kyoon Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Vir Phoha, Qinru Qiu, James S. Royer, Jeffrey Saltz, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Sucheta Soundarajan, Jian Tang, Yuzhe (Richard) Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Li Wang, Hong Wang, Yanzhi Wang, Heng Yin, Edmund Yu, Reza Zafarani

## Description:

This combined degree is for students who want to complete consecutively the Bachelor of Science (BSCE) and Master of Science (MSCE) degree in computer engineering. The combined degree is designed to be completed in 5 years. Two courses ( 6 credits) at the 500- level or higher may be counted towards both the Bachelor's and the Master's degrees. The student is expected to be certified for the Bachelor's degree at the end of the fourth year and for the Master's degree at the end of the fifth year. Students need to initiate the application process to the combined degree program during the first semester of their junior year of the BSCE program at Syracuse University. Admission decisions will be made on the academic performance of applicants. Students need to use the established process for regular MS applications.

## Total Credits: 156

Computer Engineering/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 129 credits for the Bachelor of Science in Computer Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

Computer Science, BS/MS
Combined Degree Program

## Contact

Susan Older, 4-181 Center for Science and Technology, 315-443-4679, Fax 315-443-2583; sueo@ecs.syr.edu

## Faculty

Thomas Barnard, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Jun Hwan (Brandon) Choi, Wenliang (Kevin) Du, Sara Eftekharnejad, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Jennifer Graham, Mustafa Cenk Gursoy, Robert Irwin, Can Isik, Andrew ChungYeung Lee, Jay Kyoon Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Vir Phoha, Qinru Qiu, James S. Royer, Jeffrey Saltz, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Sucheta Soundarajan, Jian Tang, Yuzhe (Richard) Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Li Wang, Hong Wang, Heng Yin, Edmund Yu, Reza Zafarani

This combined degree program is offered for the student who wants to complete consecutively the bachelor's and master's degrees in computer science. The combined degree program is designed to be completed in five years, with the student taking two master's degree courses in the senior year. Up to 6 credit hours may be counted towards both the bachelor's and the master's degrees, so that the two degrees together require at least 147 credits. The student is normally certified for the bachelor's degree at the end of the fourth year and for the master's degree at the end of the fifth year.
Admission to the combined degree program, normally requested during the second semester of the junior year, is based on academic performance.
*Students are accepted for graduate study after completion of the third year of study but are not fully matriculated as graduate students until bachelor's degree requirements have been met. The undergraduate degree is awarded before completion of the graduate degree. Graduate courses taken in the fourth year of study count toward fulfillment of both undergraduate and graduate degree requirements. The graduate courses are included in the undergraduate tuition and appear only on the undergraduate record, and grades calculate only toward the undergraduate GPA. A block of transfer credits labeled as "transferred from SU undergraduate record" appears on the graduate record, if needed, and applies credit hours toward the graduate degree.
*See Online Course Catalog, Academic Rules, Degrees, TABLE H Combined Undergraduate/ Graduate Degree Programs.

> Computer Science/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

> Students will complete 124 credits for the Bachelor of Science in Computer Science degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of " $B$ " or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA

## Electrical Engineering, BS/MS

## Contact:

Prasanta K. Ghosh, Program Director, 4-131 Center for Science and Technology, 315-4434440,
Fax 315-443-2583; pkghosh@syr.edu

## Faculty

Thomas Barnard, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Jun Hwan (Brandon) Choi, Wenliang (Kevin) Du, Sara Eftekharnejad, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Jennifer Graham, Mustafa Cenk Gursoy, Robert Irwin, Can Isik, Andrew ChungYeung Lee, Jay Kyoon Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Vir Phoha, Qinru Qiu, James S. Royer, Jeffrey Saltz, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Sucheta Soundarajan, Jian Tang, Yuzhe (Richard) Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Li Wang, Hong Wang, Yanzhi Wang, Heng Yin, Edmund Yu, Reza Zafarani

## Description:

This combined degree is for students who want to complete consecutively the Bachelor of Science (BSEE) and Master of Science (MSEE) degree in electrical engineering. The combined degree is designed to be completed in 5 years. Two courses ( 6 credits) at the 500- level or higher may be counted towards both the Bachelor's and the Master's degrees. The student is expected to be certified for the Bachelor's degree at the end of
the fourth year and for the Master's degree at the end of the fifth year. Students need to initiate the application process to the combined degree program during the first semester of their junior year of the BSEE program at Syracuse University. Admission decisions will be made on the academic performance of applicants. Students need to use the established process for regular MS applications.

## Total Credits: 156

Electrical Engineering/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 132 credits for the Bachelor of Science in Electrical Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work
experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework
Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Environmental Engineering/ Business Administration (3-2 Program), BS/MBA

## Contact:

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 129 credits for the Bachelor of Science in Environmental Engineering degree and an additional 54 credits for the

## MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework
Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of " $B$ "
or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Mechanical Engineering/

 Business Administration (3-2 Program), BS/MBA
## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 128 credits for the Bachelor of Science in Mechanical Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework
Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Aerospace Engineering

## AEE 270 - Experience Credit

## College of Engineering and Computer Science

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports, or an examination. Limited to those in good academic standing. Repeatable

## AEE 290 - Independent Study

## College of Engineering and Computer Science

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## AEE 342 - Aerodynamics

College of Engineering and Computer Science
4 credit(s) At least $1 x$ fall or spring

Vorticity, circulation, potential flow and superposition of flows. Lift, drag, moments of twoand three-dimensional wings. Thin airfoil theories. Panel methods. Lifting-line theory. Flow separation and stall. Viscous drag reduction. PREREQ: MAE 341

## AEE 343-Compressible Flow

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Isentropic flow, normal and oblique shock waves, expansion fans. Compressible flow in converging and diverging nozzles. Course includes lab component with written report.
PREREQ: MAE 251 AND MAE 341

## AEE 427 - Aircraft Performance and Dynamics

## College of Engineering and Computer Science

4 credit(s) At least 1x fall or spring
Wing aerodynamic, thrust and drag. Performance analysis of aircraft: take-off, landing, climbing, gliding, turns, range and load factors. Control surfaces. Longitudinal and lateral static stability. Dynamic stability. Introduction to autopilot. PREREQ: MAE 341

## AEE 442 - High Speed Aerodynamics

College of Engineering and Computer Science 3 credit(s) Irregularly
Approximate theories of airfoils and wings, including linearized approximations, singularity distribution and vortex lattice method; effect of sweep; delta wings; method of characteristics, finite difference schemes, and time-dependent approaches.
PREREQ: MAE 342 AND 343

## AEE 446 - Propulsion

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Fluid dynamics and thermodynamics of airbreathing engines, including gas turbine, ramjet and scramjet. Engine component analysis, including inlets, combustors, nozzles, and turbomachines. Introduction to rocket propulsion. PREREQ: AEE 343

## AEE 470 - Experience Credit

College of Engineering and Computer Science 1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## AEE 471 - Design/Analysis of Aerospace Structure

College of Engineering and Computer Science
4 credit(s) At least 1x fall or spring
Structural configuration of modern aircraft and spacecraft. Vehicle design requirements. Symmetric and unsymmetric beams. Single and multicell thin-walled tubes. Skin-stringer construction. Shear flow. Shear lag. Ring, frame, and fuselage analysis. Finite element analysis. Design projects.
PREREQ: ECS 325

## AEE 472 - Synth of Aerosp Systems

College of Engineering and Computer Science
4 credit(s) At least $1 x$ fall or spring Design of a subsonic, supersonic, or VTOL aircraft; a missile system; or a spacecraft to meet specified performance and cost criteria. Oral and written preliminary and final reports.
PREREQ: AEE 427

## AEE 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## AEE 491 - Hypersonics Research Project I

College of Engineering and Computer Science
1-3 credit(s) Irregularly
In depth exploration of a problem in the field of hypersonics under the supervision of a faculty member. Projects may be experimental or computational research on hypersonic phenomena, or a conceptual study of hypersonic vehicles.

## AEE 492 - HypHypersonics Research Project II

College of Engineering and Computer Science 1-3 credit(s) Irregularly
Advanced research on a problem in the field of hypersonics under the supervision of a faculty member. Projects may be experimental or computational research on hypersonics phenomena, or a conceptual study of hypersonic vehicles.

## AEE 499 - Honors Capstone Project <br> College of Engineering and Computer Science

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## AEE 527 - Helicopter Dynamics

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Introduction to the helicopter; hover- and vertical-
flight analysis; autorotation and vertical descent; blade motion and rotor control; aerodynamics of forward flight.
PREREQ: AEE 342 AND AEE 427
AEE 542 - Hypersonic/High Temperature Gas Dynamics

College of Engineering and Computer Science 3 credit(s) Irregularly Inviscid and viscous hypersonic fluid dynamics with and without high temperature effects. Approximate and exact methods for analyzing hypersonic flows. Elements of statistical thermodynamics, kinetic theory, and nonequilibrium gas dynamics. Experimental methods.
PREREQ: MAE 251 AND AEE 343

## AEE 577 - Introduction to Space Flight

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Two-body orbital mechanics, orbits and trajectories, interplanetary transfers, vehicle and booster performance.
PREREQ: ECS 222

## Bioengineering

## BEN 212 - Experimental Methods in Chemical Engineering and Bioengineering

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: CEN 212
Statistical analysis and presentation of experimental data. Parameter estimation. Design of experiments. Hardware and software for computer interfacing. Collection, analysis, and reporting of laboratory data.
PREREQ: MAT 296 AND ECS 104

## BEN 231 - Mass and Energy Balances

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CEN 231
Material balances for single units and multistage processes. Recycle and bypass streams. Gas laws. Energy balances including latent and sensible heat effects, heats of reaction. Applications to biomedical processes.

## BEN 270 - Experience Credit

College of Engineering and Computer Science 1-6 credit(s)
Participation in a discipline- or subject-related
experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## BEN 280 - International Course

College of Engineering and Computer Science
1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## BEN 301 - Biological Principles for Engineers

College of Engineering and Computer Science
4 credit(s) At least $1 x$ fall or spring Introduction to cell types and structure, nucleic acids, proteins and enzyme kinetics. Gene expression including transcription, translation and post-translational modification. Introduction to genomics, proteomics and bioinformatics. Genetic engineering and tissue engineering. Applications to biotechnology.
PREREQ: CHE 275 AND MAT 397 AND ECS 104

## BEN 333 - Fluid Transport

## College of Engineering and Computer Science

3 credit(s) At least 1x fall or spring
Crosslisted with: CEN 333
Fluid statics. Shear stress and viscosity. Energy and momentum balances for flow systems. Dimensional analysis. Friction and drag coefficients. Turbulent flow of compressible and incompressible fluids. Non-Newtonian fluids.
PREREQ: MAT 397 AND (PHY 212 OR PHY 216)

## BEN 341 - Fundamentals of Heat and Mass Transfer

College of Engineering and Computer Science 4 credit(s) At least $1 \times$ fall or spring
Crosslisted with: CEN 341
Principles of heat and mass transfer. Conduction, convection, and radiation. Thermal properties of materials. Solutions of steady state and transient heat and mass transfer problems. Diffusion with chemical reaction. Convective mass transfer.
PREREQ: CEN 333 OR BEN 333

## BEN 364 - Quantitative Physiology

College of Engineering and Computer Science
4 credit(s) At least 1x fall or spring Double Numbered with: BEN 664 Introduction to mammalian physiology from an engineering perspective. Each of the major systems of the body will be addressed, with
an emphasis on electrical, mechanical, and thermodynamic principles Lecture and laboratory. Additional work required of graduate students. PREREQ: BEN 301

## BEN 400 - Selected Topics

College of Engineering and Computer Science
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BEN 433 - Drug Delivery

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Crosslisted with: CEN 433
Double Numbered with: BEN 633
Integration of biology, chemistry, and engineering to understand how pharmaceuticals are delivered to, and behave within, the body. Includes drug formulation, pharmacokinetics, pharmacodynamics, controlled release, and targeted delivery. Additional work is required of graduate students.

## BEN 458 - Biomedical Imaging

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Double Numbered with: BEN 658 Basics of imaging techniques useful for biological and medical applications. Microscopy, electron microscopy, acoustic microscopy, atomic force microscopy, magnetic resonance imaging. Discussion of images and literature. MRI laboratory exercises.

## BEN 462 - Biofuels, Bioproducts, and Biorefining

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Crosslisted with: CEN 462
Double Numbered with: BEN 662
Survey of modern technologies available for the production of transportation fuels from abundant natural resources. Additional work required of graduate students.

## BEN 465 - Biomechanics

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: BEN 665
Functions and mechanical properties of cells and tissues, how those cells and tissues combine to form structures, the properties and behaviors of those structures, and biomechanical techniques to analyze the structures and individual components.
PREREQ: ECS 221 AND MAT 485 AND BEN 364

## BEN 466 - Advanced Biomechanics

College of Engineering and Computer Science 3-4 credit(s) Irregularly
Double Numbered with: BEN 666
Introduction to kinesiology and kinematics; finite element method; joint force analysis and the properties of bone cartilage and tendon as related to functional analysis of bone-joint systems. PREREQ: BEN 465

## BEN 468 - Biomaterials \& Medical Devices

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: BEN 668
Materials science and biological issues associated with medical devices and biomaterials are discussed. Bulk and surface materials science, tissue engineering, degradation and biocompatibility are addressed and related to medical device design and regulatory issues.

## BEN 470 - Experience Credit

## College of Engineering and Computer Science

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## BEN 481 - Bioinstrumentation

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Measurement and analysis of biological signals in the time and frequency domain. Operational amplifiers, analog, and digital signal processing; sensors and sources of biopotentials; biopotential electrodes. Matlab, Labview and C programming. PREREQ: ELE 231 AND ELE 232

## BEN 485 - Bioengineering Laboratory

College of Engineering and Computer Science 4 credit(s) At least 1x fall or spring Practical experience in the design, execution and analysis of experiments related to biomechanics and bioinstrumentation. Technical writing skills will also be emphasized. One four-hour laboratory a week.
COREQ: BEN 465 AND BEN 481

## BEN 487 - Bioengineering Capstone Design

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Bioengineering design experience. Lecture, discussion, active learning components. Team design of biomedical system, device, or process from concept through prototype production. Includes design strategy, reliability,

FDA regulations, patents, oral, and written presentations.

## BEN 490 - Independent Study

## College of Engineering and Computer Science

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study based on a plan submitted by the student.
Repeatable

## BEN 498 - Senior Thesis

## College of Engineering and Computer Science

 3 credit(s) Upon sufficient interest Mentored investigation of an approved topic under the supervision of a member of the faculty. A written report and oral presentation are required in accordance with program guidelines.
## BEN 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## BEN 500 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BEN 541 - Principles of Tissue Engineering

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Cellular and biomaterials principles relevant to tissue engineering, focusing on cellular and tissue organization; regulation of cell behavior; biomaterials for tissue regenerations; tissue engineering applications in cardiovascular, neurological, and musculoskeletal and other organ systems.

## BEN 561 - Polymer Science \& Engineering

## College of Engineering and Computer Science

3 credit(s) Irregularly
Crosslisted with: CEN 561
Polymer structure, physical properties, and applications of polymers. Polymer synthesis, characterization of molecular structure, and copolymerization and blending. Unique physical properties of polymeric materials. Processing and applications of polymers.

BEN 575 - Process Control<br>College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Crosslisted with: CEN 575 Modeling and linearization of process dynamics. Transfer functions. Performance and stability of feedback control loops. Introduction to multivariable and digital controls.

## BEN 580 - International Course

College of Engineering and Computer Science 1-12 credit(s) Irregularly Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Chemical Engineering

CEN 212 - Experimental Methods in Chemical Engineering and Bioengineering
College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Crosslisted with: BEN 212
Statistical analysis and presentation of experimental data. Parameter estimation. Design of experiments. Hardware and software for computer interfacing. Collection, analysis, and reporting of laboratory data. PREREQ: MAT 296 AND ECS 104

CEN 231 - Mass and Energy Balances
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Crosslisted with: BEN 231
Material balances for single units and multistage processes. Recycle and bypass streams. Gas laws. Energy balances including latent and sensible heat effects, heats of reaction. Applications to biomedical processes.

## CEN 252 - Chemical Engineering Thermodynamics I

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Review of first law. Second law and thermodynamic analysis of processes. Power and refrigeration cycles. Thermodynamic properties of pure substances and homogeneous mixtures. Phase behavior of ideal solutions. PREREQ: CEN 231

## CEN 311 - Chemical Engineering Laboratory I

College of Engineering and Computer Science
2 credit(s) At least 1x fall or spring Introduction to report writing and laboratory safety. Experiments on fluid mechanics, heat conduction, and convective heat transfer. Analysis of experimental data. Engineering reports, summary reports, and oral presentations required. One three-hour laboratory each week. COREQ: CEN 341

## CEN 333 - Fluid Transport

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Crosslisted with: BEN 333
Fluid statics. Shear stress and viscosity. Energy and momentum balances for flow systems. Dimensional analysis. Friction and drag coefficients. Turbulent flow of compressible and incompressible fluids. Non-Newtonian fluids. PREREQ: MAT 397 AND (PHY 212 OR PHY 216)

## CEN 341 - Fundamentals of Heat and

 Mass TransferCollege of Engineering and Computer Science
4 credit(s) At least 1x fall or spring
Crosslisted with: BEN 341
Principles of heat and mass transfer. Conduction, convection, and radiation. Thermal properties of materials. Solutions of steady state and transient heat and mass transfer problems. Diffusion with chemical reaction. Convective mass transfer. PREREQ: CEN 333 OR BEN 333

## CEN 353 - Chemical Engineering Thermodynamics II

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Thermodynamics of homogeneous mixtures and mixing processes. Phase equilibrium for nonideal solutions. Equilibrium stage separations with applications including distillation and extraction. Chemical reaction equilibria.
PREREQ: CEN 252

## CEN 390 - Research In CEN

College of Engineering and Computer Science 1-6 credit(s)
Repeatable

## CEN 400 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CEN 412 - Chemical Engineering Laboratory II

College of Engineering and Computer Science
2 credit(s) At least $1 x$ fall or spring Report writing and laboratory safety. Statistical analysis and experimental design. Experiments on distillation, diffusion, and convective mass transfer. Engineering reports, summary reports, and oral presentations required. One four-hour laboratory a week.
PREREQ: CEN 341

## CEN 433 - Drug Delivery

## College of Engineering and Computer Science

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: BEN 433
Double Numbered with: CEN 633 Integration of biology, chemistry, and engineering to understand how pharmaceuticals are delivered to, and behave within, the body. Includes drug formulation, pharmacokinetics, pharmacodynamics, controlled release, and targeted delivery. Additional work is required of graduate students.

## CEN 461 - Environmental Chemistry and Analysis

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Crosslisted with: CIE 471
Double Numbered with: CEN 661 An introduction to chemical principles in natural and engineered environmental systems. Thermodynamics and kinetics of reactions; acidbase chemistry; environmental organic chemistry; treatment process design applications. Includes selected laboratory exercises. Additional work is required of graduate students.

## CEN 462 - Biofuels, Bioproducts, and Biorefining

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Crosslisted with: BEN 462
Double Numbered with: CEN 662
Survey of modern technologies available for the production of transportation fuels from abundant natural resources. Additional work required of graduate students.

## CEN 472 - Applied Env Microbiology

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CIE 472
Double Numbered with: CEN 672 General Principles and application of environmental microbiology and microbial processes. Role of microbes in water pollution control, environmental health, and element cycling in the environment. Additional work is required of
graduate students.

## CEN 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CEN 499 - Honors Capstone Project <br> College of Engineering and Computer Science

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## CEN 500 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CEN 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: NUC 520
Radiochemistry for nuclear reactors and nuclear fuel reprocessing; nonproliferation issues through detection and monitoring, nuclear fuel reprocessing and design, waste vitrification and storage facilities, safety issues in nuclear fuel reprocessing.
PREREQ: NUC 301

## CEN 540 - Experiential Studies in Nuclear Technology

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest Crosslisted with: NUC 540
Introduction to experimental methods, procedures and research techniques through projects at participating government facilities, industrial entities or Syracuse University. PREREQ: NUC 301 AND (NUC 510 OR NUC 520)

## CEN 542 - Heat and Mass Transfer Operations

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Selected topics in mass and heat and heat transfer. Application of principles of units operations.
PREREQ: CEN 341

## CEN 551 - Biochemical Engineering

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Introduction to microbiology, biochemical kinetics. Biochemical-reactor design, including methods for oxygen transfer and control. Introduction to separation processes in biochemical engineering.
PREREQ: CHE 275 AND (CEN 333 OR BEN 333)

## CEN 561 - Polymer Science \& Engineering

College of Engineering and Computer Science 3 credit(s) Irregularly
Crosslisted with: BEN 561
Polymer structure, physical properties, and applications of polymers. Polymer synthesis, characterization of molecular structure, and copolymerization and blending. Unique physical properties of polymeric materials. Processing and applications of polymers.

## CEN 565 - Bioremediation

College of Engineering and Computer Science 3 credit(s) Irregularly
Crosslisted with: CIE 565
Uses of bioremediation in engineering applications. Role of microorganisms in degradation of pollutants and contaminants.
Regulatory, societal, and legal issues of bioremediation.
PREREQ: CIE 472 OR CEN 472

## CEN 567 - Biotechnology

College of Engineering and Computer Science
3 credit(s) Irregularly
Crosslisted with: CIE 567
Engineering applications of biotechnology in agriculture, industry, and the environment. Principles of molecular genetics as applied in the biotechnology industry. Hands-on exposure to laboratory recombinant DNA technology.
PREREQ: CIE 472/CEN 472

## CEN 573 - Principles and Design in Air Pollution Control

College of Engineering and Computer Science
3 credit(s) Irregularly
Fundamental principles of pollution control, design of control processes and equipment. Criteria for selection of control processes and equipment for gaseous and particulate pollutants.

## CEN 574 - Process Design

College of Engineering and Computer Science 4 credit(s) At least 1x fall or spring Chemical engineering principles for plant design and optimal process operation. Cost estimation and profitability analysis. Shortcut and computeraided process design techniques. Environmental impact and health and safety concerns.

PREREQ: CEN 353 AND CEN 587

## CEN 575 - Process Control

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: BEN 575
Modeling and linearization of process dynamics.
Transfer functions. Performance and stability of feedback control loops. Introduction to multivariable and digital controls.
PREREQ: MAT 485

## CEN 576 - Green Engineering

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Review of environmental regulations. Evaluating
the environmental fate of chemicals. Techniques for improving environmental performance of processes. Methods for evaluating environmental performance, design of unit operations, and flowsheets for pollution prevention. Environmental cost accounting.
PREREQ: CEN 341 AND CEN 353

## CEN 587 - Chemical Reaction Engineering

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Conversion and reactor sizing, isothermal reactor design for flow and batch systems, rate laws and stoichiometry, analysis of rate data, multiple reactions, introduction to heterogeneous reactor design.
PREREQ: CEN 341 AND CHE 356

## CEN 590 - Recent Advances In CEN

College of Engineering and Computer Science 3 credit(s) Irregularly
Selected topics in research and new areas of competence in chemical engineering.
Repeatable

## Civil Engineering

## CIE 273 - Introduction to Geomatics and BIM

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Skills for civil and environmental engineering. Map reading and theory of measurement. 2D and 3D Civil Engineering Design using AutoCAD software. Introduction to application of Building Information Modeling in construction engineering.
PREREQ: MAT 295

## CIE 274 - Sustainability in Civil and Environmental Systems

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring

Introduction to systems theory and concepts applied to natural and built environments. Sustainability, ecosystems, mass and energy balances, chemical transformation and reactions. Basic principles for sustainable civil and environmental engineering design and decision making.
PREREQ: CHE 106 OR CHE 109 OR CHE 151 AND MAT 296

## CIE 326 - Engineering Materials

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Atomic, molecular, and crystalline structures of solid engineering materials. Explanation and interpretation of physical, mechanical, and electrical properties of materials based on these structures. Two one-hour lectures and one twohour laboratory a week.

## CIE 327 - Prin of Fluid Mechanics

College of Engineering and Computer Science
4 credit(s) At least $1 x$ fall or spring
Dimensional analysis. Hydrostatics. Equations of motion. Bernoulli's equation. Euler's momentum theorem. One-dimensional analysis. Velocity potential. Stream function. Laminar viscous flow. Potential flow applications.
PREREQ: MAT 397 AND ECS 221

## CIE 329 - Probability, Statistics and Risk for Civil and Environmental Engineering

College of Engineering and Computer Science 4 credit(s) At least $1 x$ fall or spring
Summary statistics and graphical representations of data. Elements of probability theory. Normal distribution. Simple regression. One- and two-sample inference. Elementary stochastic processes. Risk and reliability. Bayesian decision analysis. Applications in civil and environmental engineering.
PREREQ: MAT 485 OR 331

## CIE 331 - Analysis of Structures and Materials

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Analysis of statically determinate and indeterminate trusses, beams, and frames by traditional and computer-based methods. Physical, mechanical, and thermal properties of conventional and environmental friendly construction materials.
PREREQ: ECS 325
CIE 332 - Design of Concrete Structures

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

Analysis and design of environmentally friendly reinforced concrete structures subjected to flexural, shear, and axial loads. Analysis of stresses and deformations and their relation to codes and specifications.
PREREQ: CIE 331

## CIE 337 - Introduction to Geotechnical Engineering

## College of Engineering and Computer Science

4 credit(s) At least 1x fall or spring
Nature and composition of soils. Formation and classification of natural soils and man-made construction materials. Compaction, permeability and seepage, consolidation and settlement, shear behavior and strength.
PREREQ: ECS 325

## CIE 338 - Foundation Engineering

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Subsurface investigation, bearing capacity, lateral earth pressures. Design of retaining structures, shallow and deep foundations. Slope stability, foundations on difficult soils, and soilimprovement methods.
PREREQ: CIE 337

## CIE 341 - Introduction to Environmental Engineering

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Fundamental principles of environmental processes, pollution, and pollution control, including mass transfer, water chemistry and microbiology, water and air pollution, and solidand hazardous-waste management.
PREREQ: CIE 274

## CIE 352 - Water Resources Engineering

## College of Engineering and Computer Science

4 credit(s) At least 1x fall or spring
Analysis and design of hydraulic facilities including pipe systems, open channels, pumps and turbines, and ground water wells. Analysis of rainfall and riverflow; surface and subsurface water storage. Laboratory experiments and problem solving.
PREREQ: CIE 327 OR MAE 341

## CIE 372 - Project Layout and Site Planning

## College of Engineering and Computer Science

3 credit(s) At least 1x fall or spring Construction surveying; cut and fill calculations; route surveying; GPS methods; site planning and layout issues. Project-oriented course includes CAD applications in civil engineering and field work with modern surveying equipment and software.

PREREQ: CIE 272

## CIE 401 - Construction Engineering and Project Management

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Double Numbered with: CIE 601 Overview of various aspects of construction engineering and project management. Construction contracts, resource management, scheduling, equipment, quality control, productivity, construction safety, cash flow concepts, legal and management structures. Additional coursework required of graduate students.

## CIE 433 - Intermediate Structural Analysis

## College of Engineering and Computer Science

 3 credit(s) IrregularlyAnalysis of cables and arches. Classical and matrix methods of truss, beam, and frame analysis. Computer and numerical methods of structural analysis. Relation of analysis to design. PREREQ: CIE 331

## CIE 442 - Treatment Processes in Environmental Engineering

College of Engineering and Computer Science
$3-4$ credit(s) At least $1 x$ fall or spring
Double Numbered with: CIE 642
Fundamental engineering concepts and principles used for the design and operation of water and wastewater treatment systems. Estimating water demand and wastewater flows in the urban water use cycle. Significance of government regulations and standards.
PREREQ: (CIE 327 OR MAE 341) AND CIE 341

## CIE 443 - Transportation Engineering

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CIE 643
Transportation systems, modes and significance.
Traffic engineering fundamental relationships and field studies. Intersection design and control. Geometric design of road alignments. Introduction to transportation planning. Additional work required of graduate students. A research report is required for CIE 643.

## CIE 457 - Biogeochemistry

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CIE 657
Biogeochemical relationships as a unifying concept for ecological systems, including importance of biogeochemical relationships in ecosystems and global cycles. The interface between abiotic and biotic components of
ecosystems is explained. Additional work required of graduate students.
PREREQ: CHE 106 AND CHE 107

## CIE 463 - Introduction to Sustainable Engineering

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Double Numbered with: CIE 663 Introduction to principles underlying engineering decisions to improve our quality of life without jeopardizing quality of life for future generations. Application of these principles to qualitative and quantitative engineering problems. Additional coursework required of graduate students.

## CIE 471 - Environmental Chemistry and Analysis

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: CEN 461
Double Numbered with: CIE 671 An introduction to chemical principles in natural and engineered environmental systems. Thermodynamics and kinetics of reactions; acidbase chemistry; environmental organic chemistry; treatment process design applications. Includes selected laboratory exercises. Additional work is required of graduate students.

## CIE 472 - Applied Env Microbiology

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: CEN 472
Double Numbered with: CIE 672 General Principles and application of environmental microbiology and microbial processes. Role of microbes in water pollution control, environmental health, and element cycling in the environment. Additional work is required of graduate students.

## CIE 473 - Transp Procss/Env Engrng

College of Engineering and Computer Science
3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: CIE 673
Fundamentals and applications of mass and heat transport in environmental engineering. Molecular and turbulent diffusion, advection, dispersion, settling, and surface transfer in air and water. Quantitative applications in treatment systems and the natural environment. Additional work is required of graduate students.
PREREQ: (CIE 327 OR MAE 341) AND CIE 341

## CIE 474 - Environmental Health Engineering

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: CIE 674

An introduction to the relationship between human health and environmental processes. Toxicological effects of air, water and soil pollution. Approaches to risk assessment. Engineering approaches to minimize environmental health risks.
PREREQ: CHE 106 AND CIE 341

## CIE 475 - Civil and Environmental Engineering Design

College of Engineering and Computer Science
4 credit(s) At least 1x fall or spring Capstone design experience. Fundamental principles in various areas of civil and environmental engineering applied to open-ended design projects. Economics, safety, reliability, environmental, sustainability, ethical and social considerations.

## CIE 478 - Rehabilitation of Civil Infrastructure

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CIE 678
Deterioration of construction materials. Evaluation, non-destructive testing, and rehabilitation of existing structures. Properties and applications of repair materials. Seismic retrofit of bridges. Analysis and design of structural members retrofitted with carbon fiber reinforced polymer composites.
PREREQ: CIE 332 AND ECS 325

## CIE 490 - Independent Study

College of Engineering and Computer Science
1-6 credit(s) At least $1 x$ fall or spring In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CIE 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## CIE 529 - Risk Anlys in Civ Engin

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Probability, statistics, and decision theory applied to a variety of civil-engineering disciplines, such as structural design and analysis, geotechnical, water quality, water resources, and transportation. PREREQ: MAT 397

## CIE 535 - Strctrl Steel Design

College of Engineering and Computer Science 3 credit(s) Odd academic yr e.g. 2007-8 Design of structures using load- and resistancefactor design concept. Limit states design of columns, beams, beam-columns, frames, connections, plate girders, and composite sections. Computer applications to design. PREREQ: CIE 331

## CIE 536 - Prestrssd Concrete Design

College of Engineering and Computer Science
3 credit(s) Odd academic yr e.g. 2007-8
Analysis and design of prestressed concrete members for flexure, shear, torsion, and compression. Basic concept of prestressing. Stress computation and prestress loss estimation. Deflection and crack control.
PREREQ: CIE 331

## CIE 538 - Dynamics of Structures

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Response of single and multiple degree of freedom systems to dynamic loadings (harmonic, blast, wind, earthquake); design of buildings, bridges, and pipelines for dynamic loading (with particular emphasis on earthquakes); building and bridge codes.

## CIE 545 - Pavement Design

## College of Engineering and Computer Science

 3 credit(s) Even Academic Yr e.g. 2004-5 Pavement types and stress analysis, traffic assessment, subgrade and pavement materials evaluation, design of flexible and rigid pavements for highways and airports, pavement distress and rehabilitation, introduction to pavement management systems and SuperPave mix design. PREREQ: CIE 338COREQ: CIE 443

## CIE 548 - Engineering Economics and Technology Valuation

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring Crosslisted with: MAE 548
Value-based assessment and management of engineering/technology projects: equivalence; discounted cash flow; taxes/depreciation; financial statements. Risk-adjusted valuation: risk/uncertainty in staged projects; Monte Carlo simulations; decision trees; real options; project portfolio management.
PREREQ: MAT 296

## CIE 549 - Designing with Geofoam

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Introduction to geofoam production, physical
properties, evaluation of engineering parameters, specification and quality assurance, analyses and design of selected applications, comparison with conventional methods, field monitoring, and case histories.
PREREQ: CIE 338

## CIE 551 - Energy Conversion

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: MAE 551
Energy demand and resources. Fundamentals of combustion. Power plants, refrigeration systems. Turbines and engines. Advanced systems. Direct energy conversion. Alternate energy sources. Energy storage. Costs and environmental impact.

## CIE 552 - Building Environmental Measurements and Controls

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest Crosslisted with: MAE 552
Fundamentals of building ventilating methods for measuring and controlling indoor environmental conditioning, thermal comfort, and indoor air quality.
PREREQ: MAE 341 AND MAE 355

## CIE 553 - HVAC Systems Analysis and Design

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest
Crosslisted with: MAE 553
Fundamentals of moist air properties, basic air conditioning processes, heat transfer in building structures, heating and cooling load calculations, and air distribution systems.
PREREQ: MAE 251

## CIE 554 - Prin Envrn Toxicology

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Factors that make chemicals environmental hazards and techniques used in their evaluation. Topics include chemical, physiological, and molecular aspects of toxicology; transport and fate of chemicals in the environment; and current legislation.
PREREQ: (BIO 121 AND BIO 123) OR (CHE 106 AND CHE 107 AND CHE 275) OR (CHE 109 AND CHE 129)

## CIE 555 - Hazardous Waste Mgmt

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Regulations that address management of hazardous wastes. Practices and technologies commonly used in meeting regulations. Investigative and diagnostic techniques.

## CIE 558 - Solid Wastes: Collection and Disposal

## College of Engineering and Computer Science

3 credit(s) Odd academic yr e.g. 2007-8
Composition of refuse. Quantities produced by individuals and industries. Collection equipment, methods, and associated costs. Disposal problems and solutions, such as landfills, incineration, and composting.

## CIE 561 - Air Resources I

## College of Engineering and Computer Science

3 credit(s) Odd academic yr e.g. 2007-8 Occurrence, nature and properties, major sources and quantities of contaminants. Ambient air concentration levels, community distribution patterns, and control of air pollution.

## CIE 565 - Bioremediation

## College of Engineering and Computer Science

3 credit(s) Irregularly
Crosslisted with: CEN 565
Uses of bioremediation in engineering applications. Role of microorganisms in degradation of pollutants and contaminants. Regulatory, societal, and legal issues of bioremediation.
PREREQ: CIE 472/CEN 472

## CIE 567 - Biotechnology

College of Engineering and Computer Science 3 credit(s) Irregularly
Crosslisted with: CEN 567
Engineering applications of biotechnology in agriculture, industry, and the environment. Principles of molecular genetics as applied in the biotechnology industry. Hands-on exposure to laboratory recombinant DNA technology. PREREQ: CIE 472

## CIE 570 - Water\&Wastewtr Trtmnt Des

College of Engineering and Computer Science 3 credit(s) Irregularly Design of water and wastewater treatment plants; design capacity, process size and configuration, and overall treatment system performance for specific use needs and regulatory requirements. Groups prepare designs and cost estimates with written and oral reports.
PREREQ: CIE 327 AND CIE 342
Repeatable

## CIE 571 - Water Quality Modeling

College of Engineering and Computer Science
3 credit(s) Odd academic yr e.g. 2007-8 Conceptual and mathematical models of water quality in surface waters. Application of mass and energy balances to aquatic systems. Numerical methods for solution of governing equations. Students will build simple models and use
existing water quality modeling software. PREREQ: MAT 296 AND CIE 341

## CIE 584 - Designg W/Geosynthetics

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest
Engineering properties of geosynthetics (geotextiles, geogrids, geonets, geomembranes, and geocomposites). Design of filters using geotextiles, retaining structures using geosynthetics, design of liquid impoundment, and solid waste containment facilities.
PREREQ: CIE 337

## CIE 588 - Principles of Wind Turbines <br> College of Engineering and Computer Science <br> 3 credit(s) Upon sufficient interest <br> Crosslisted with: ECS 588, MAE 588 <br> Aerodynamics, performance, control, and electrical aspects wind turbines. <br> PREREQ: MAE 341

## Computer and Information Science

## CIS 223 - Statistical Reasoning and Practice

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Methods for exploratory data analysis. Graphical and numerical summaries of numerical and categorical data. Drawing conclusions from data. Basic probability, correlation, estimation and testing. Concepts of study design.
PREREQ: MAT 194

## CIS 252 - Introduction to Computer Science

College of Engineering and Computer Science 4 credit(s) At least 1x fall or spring Programming emphasizing recursion, data structures, and data abstraction. Elementary analysis of and reasoning about programs. Public policy issues. Extensive programming. Three hours of lecture and one hour of computer laboratory.

## CIS 321 - Introduction to Probability and Statistics

College of Engineering and Computer Science
4 credit(s) At least $1 x$ fall or spring
Programming-oriented introduction to fundamentals in statistics and probability; elementary statistics, graphical and numerical representation; probability distributions; tests and confidence intervals; regression, and correlation. CPS 621 adds Journalism applications of statistical methods.
PREREQ: MAT 295

## CIS 341 - Computer Organization \& Programming Systems

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Essentials of computer organization: digital logic, microprogramming, processors, memories, input-output devices. Instruction sets, assembly language, data types, relation to high level languages. Program construction, traps and interrupts, input-output programming. PREREQ: ECS 102 OR CIS 252

## CIS 342 - Introduction to Systems Programming

## College of Engineering and Computer Science

1 credit(s) At least 1 x fall or spring Input and output, including error handling, file descriptors and interface to OS. Pointers and pointer arithmetic. Structures. Memory functions and storage allocation. Makefiles, header files, libraries, compilation, and linking. PREREQ: CIS 351
COREQ: CIS 341

## CIS 351 - Data Structures

College of Engineering and Computer Science 4 credit(s) At least 1x fall or spring Abstract data structures, algorithm analysis, array, string lists, trees, binary search trees, priority queues, hashing, graphs, object-oriented programming. Three hours of lectures. One hour of computer laboratory.
PREREQ: CIS 252

## CIS 352 - Programming Language: Theory \& Practice

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Environments, stores, scoping, functional and imperative languages, modules, classes, data encapsulation, types, and polymorphism. Implementation of these constructs in a definitional interpreter.
PREREQ: CIS 375 AND CIS 351

## CIS 375 - Introduction to Discrete Mathematics

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Basic set theory and symbolic logic. Methods of proof, including mathematical induction. Relations, partitions, partial orders, functions, and graphs. Modular arithmetic. Credit cannot be given for both MAT 275 and CIS 275.
PREREQ: PHI 251

## CIS 380 - International Course

College of Engineering and Computer Science
1-12 credit(s) Irregularly

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## CIS 386 - Principles of Computer System Design

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Crosslisted with: CSE 386
Fundamental design principles for computer and information systems. Concurrency, race conditions, complexity, modularity, abstraction, layering, hierarchy, iteration, emergent properties, organization, virtualization, performance, atomicity, fault tolerance, consistency, and security.
PREREQ: ECS 102 AND CIS 351

## CIS 390 - Honors Seminar in Computer \& Information Science

College of Engineering and Computer Science 3 credit(s) Irregularly
Specific topics in computer and information science suitable for honors-thesis research. Repeatable

## CIS 400 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CIS 425 - Introduction to Computer Graphics

College of Engineering and Computer Science 3 credit(s) Irregularly
Graphics programming. User interfaces. Modeling and viewing transformations. Shading techniques. Representations of three-dimensional models. Curves and non-planar surfaces. Ray tracing and radiosity. Antialiasing.
PREREQ: CIS 351 OR CSE 382

## CIS 428 - Introduction to Cryptography

## College of Engineering and Computer Science 3 credit(s) Irregularly <br> Classical cryptosystems and their cryptanalysis, RSA and other public-key cryptosystems, pseudorandom sequences, zero-knowledge protocols, related ethical and social concerns. <br> PREREQ: CIS 477 OR MAT 534 OR MAT 541

## CIS 440 - Topics in Mobile Programming

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest
Crosslisted with: CSE 440
Double Numbered with: CIS 640
A variety of subjects surveyed or a particular
subject in depth. Additional coursework required of graduate students.
PREREQ: CIS 351 OR CSE 382
Repeatable 2 time(s), 9 credits maximum

## CIS 444 - Mobile Application Programming

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CSE 444
Double Numbered with: CIS 651
Development of applications for different mobile devices. Creating effective user interfaces, efficient use of persisitent storage, network services, GPS, maps and sensors. Additional work required of graduate students.
PREREQ: CIS 351 OR CSE 382

## CIS 453 - Software Specification and Design

## College of Engineering and Computer Science

3 credit(s) At least $1 x$ fall or spring
Software requirements analysis, including structured analysis methodology. Behavioral and nonbehavioral aspects of software specification. Development of specification. Development of specification documents. High-level design and software architecture.
PREREQ: CIS 351 OR CSE 382

## CIS 454 - Software Implementation

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Ethics in software development. Detailed design of software, using tools such as structure charts. Implementation and software testing. Team projects and presentations.
PREREQ: CIS 453

## CIS 458 - Data Networks: Basic Principles

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 458, ELE 458
Data communication networks, multilayer network architecture, data transmission fundamentals, network protocols, local and wide area networks, transport and application protocols.
PREREQ: CIS 321 OR MAT 521

## CIS 467 - Introduction to Artificial Intelligence

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Double Numbered with: CIS 667
Knowledge representation, production systems, search algorithms, game playing, uncertainty handling, learning, automated reasoning, computer vision, and natural language processing. Programming project or term paper required for CIS 667, not for CIS 467.
PREREQ: CIS 375 AND CIS 321 AND (CIS 351 OR CSE 382)

## CIS 468 - Natural Language Processing

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest
Double Numbered with: CIS 668 Linguistic and computational aspect of natural language processing technologies. Lectures, readings, and projects in the computational techniques required to perform all levels of linguistic processing of text. Additional work required of graduate students.

## CIS 470 - Experience Credit

College of Engineering and Computer Science
1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## CIS 471-Optimization Methods

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Classical methods of minimum and maximum, gradient methods, conjugate direction methods, linear programming and simplex algorithm, integer programming, non-linear optimization, random search algorithms.

## CIS 473 - Automata and Computability

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Countable and uncountable sets; diagonalization proofs; finite state automata; regular, context-free, context-sensitive, recursive, and r. e. languages; Turing machines; relationships between classes of languages and machines; the halting problem; proof methods for decidability and undecidabilty. PREREQ: CIS 375 OR MAT 275

## CIS 477 - Introduction to Analysis of Algorithms

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Mathematical modeling of computational
problems; searching and sorting algorithms;
search trees, heaps, and hash tables; divide-and-conquer, dynamic programming, and greedy choice design techniques; graph algorithms; NPcompleteness; and selected topics.
PREREQ: CIS 375 AND CIS 351

## CIS 478 - Introduction to Quantum Computing

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest
Purpose of QC; simple Markov processes; quantum registers; quantum state transitions; classical vs quantum models of computation; measurement and superposition; no-cloning theorem; quantum teleportation; quantum logic.
PREREQ: CIS 375 AND (MAT 397 OR MAT 331)

## CIS 483 - Introduction to Computer and Network Security

## College of Engineering and Computer Science

3 credit(s)
Crosslisted with: CSE 484
Operating system security. Authentication. Access control. Program vulnerabilities. Malicious code. Secure programming principles. TCP/IP protocols, vulnerabilities, attacks, and countermeasures. Firewalls. Intrusion detection. Secret-key and Public-key cryptography. One-way has function. Digital Signature.
PREREQ: CIS 486 OR CSE 486

## CIS 486 - Design of Operating Systems

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CSE 486
Design and implementation of modern operating systems. Resource management and protection of CPU, memory, and storage. File systems. Input/ output. Concurrent process implementation. Process synchronization. Networking. PREREQ: (CIS 341 AND CIS 342 AND CIS 351) OR (CSE 281 AND CSE 382)

## CIS 487 - Access Control, Security and

 TrustCollege of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 487
Analytical/logical basis for trusting systems. Access requests, authorizations, certificates, credentials, jurisdiction, and delegation. Applications include distributed access control, process isolation and sharing, and access policies.
PREREQ: CIS 275

## CIS 488 - Introduction to Internet Security

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring

Crosslisted with: CSE 488
Network attack techniques and methods to defend them. Topics include vulnerabilities of TCP/ IP protocols, denial of service attacks, intrusion detection, firewalls, tracing the source of attacks, anonymous communication, IPsec, virtual private network, and PKI.
PREREQ: CIS 486 OR CSE 486

## CIS 489 - Mobile Systems Security

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Components in Mobile OS; basic mobile app development; sandbox mechanism; permission enforcement; vulnerabilities; malware attacks. Additional work required of graduate students. PREREQ: CIS 486 OR CSE 486

## CIS 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CIS 499 - Honors Capstone Project

College of Engineering and Computer Science 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## CIS 500 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CIS 531 - Compiler Construction

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Programming a small compiler. Lexical analysis, tokens, finite automata, hashing. Syntax analysis, grammars, syntax trees, error recovery. Scope and type analysis, symbol tables. Run-time stack, variable addressing, expression evaluation, procedure activation, recursion. Code generation, Optimization, portability.
PREREQ: CIS 351

## CIS 543 - Control of Robots

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: ELE 516
Kinematics, dynamics, and control of mobile and/
or manipulator robots. Path planning, actuators, sensors, human/machine interface. Two hours lecture and two hours laboratory weekly. Design project.

## CIS 545 - Introduction to Combinatorics

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Crosslisted with: MAT 545
Permutations, combinations, recurrence relations, generating functions, inclusion-exclusion and applications, introductory graph theory. PREREQ: CIS 375 OR MAT 375

## CIS 551 - Modern Programming in Java

College of Engineering and Computer Science 3 credit(s)
Programming in Java with generic classes. Defining generic classes. Specifying types and inheritance. Verifying correctness of Java methods and classes. Managing concurrency, remote method invocation, and performance considerations.

## CIS 553 - Software Systems Implementation

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Organization, analysis, and documentation of a sophisticated implementation project in a prominent high-level language, such as ADA, C, or Modular-2. Substantial programming assignments and analytical documentation. Language and project may vary from year to year. PREREQ: CIS 453

## CIS 554-Object Oriented Programming in C++

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Survey of basic C constructs. Data abstraction, classes, derived classes, types, structures and template. Access control, information hiding, multiple inheritance. Formatting stream $\mathrm{I} / 0$, libraries, interfaces, modular system Organization. Substantial programming assignments. PREREQ: ECS 102

## CIS 565 - Introduction to Artificial Neural Networks

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Perceptrons and the Perceptron Convergence
Theorem; non-linear optimization, gradient descent methods; neural net architecture, conjugate-gradient and recurrent networks; Hopfield networks, Kohonen's feature maps; nonneural clustering algorithms.

## CIS 567 - Knowledge Representation and Reasoning

College of Engineering and Computer Science
3 credit(s) Irregularly
Applications of mathematical methods to knowledge bases. Methods include nonclassical, fuzzy logic and statistical inference. Application topics include planning, temporal and physical reasoning, attitudes, the frame problem, preference, constraints, qualitative differential equations, situation theory.

## CIS 581 - Concurrent Programming

## College of Engineering and Computer Science

 3 credit(s) IrregularlyProcesses, events, alphabets, and trace sets. Process equivalence. Divergence, dead-lock, fairness, and termination. Message channels, buffers, pipelines, trees, rings, grids, recursive nets. Mutual exclusion, semaphores, conditional critical regions, monitors, remote procedures. Programming exercises in Joyce.

## CIS 583 - Systems Assurance Seminar

College of Engineering and Computer Science
3 credit(s) Irregularly
Crosslisted with: CSE 583
Basic terminology of assurance and cryptography. Social and privacy issues of assurance. Ethics in computing. Legal aspects and implications of system assurance. Weekly presentations by external and internal speakers.

## Computational Science

## CPS 100 - Selected Topics

## College of Engineering and Computer Science

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CPS 155 - Introduction to Cyber Security

College of Engineering and Computer Science 3 credit(s) Irregularly
Introductory concepts of: network organization and operation security. Differentiate among physical, organizational and personal security. Introduce mechanisms and history of software, hardware and OS security. Significant hands-on laboratory component with demonstrations and projects.

## CPS 181 - Introduction to Computing

College of Engineering and Computer Science
3 credit(s) Irregularly
Organization of computers, elementary
programming, and problem solving. Applications in such areas as calculation and visualization, communication, databases, graphics, and artificial intelligence. Origins of the modern digital computer, future trends, social impact, abuses. Includes lab.

## CPS 185 - Introduction to Animation and Game Development

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest This course provides a visual introduction to computer programming. Students will learn the basics of programming and high-level 3-dimensional animation together, while programming animations and games for assignments and an integrative final project.

## CPS 196 - Introduction to Computer Programming

College of Engineering and Computer Science 3 credit(s) Every semester
Basic computing concepts, data representation, problem definition, algorithms and flow charts, programming exercises. Students may not receive credit for both CPS 196 and ECS 102.

## CPS 234 - Introduction to Computational Thinking

College of Engineering and Computer Science 3 credit(s) Irregularly
Computational-thinking skills developed through team-based problem solving. Fundamental concepts of computation, including algorithms, data organization, and computational strategies. Application of those concepts to solve problems from multiple settings and disciplines.

## CPS 290 - Independent Study

College of Engineering and Computer Science 1-6 credit(s)
Repeatable

## CPS 333 - UNIX Operating System and Internet

College of Engineering and Computer Science 3 credit(s)
UNIX operating system: commands, hierarchical file systems, editors, windowing, networking, security, administration. Emphasis on shell programming, awk scripts, sed, e-mail, newsgroups, Internet, telnet/ftp, search tools (Archie, Gopher, WAIS, Mosaic). For non-majors in computer science.

CPS 335 - JAVA programming for the Internet

College of Engineering and Computer Science 3 credit(s)

Introduction to JAVA, object-oriented programming concepts and windows programming. Variables and data types, expression evaluation, control, stand-alone programs, inheritance, polymorphism, applets, graphics classes, arrays and strings, interfaces, threads, windows, widgets, animation, sound, libraries.

## CPS 430 - Topics in Computational Science <br> College of Engineering and Computer Science 3 credit(s) Irregularly <br> A variety of subjects surveyed or a particular subject in depth. <br> Repeatable 3 time(s), 12 credits maximum

## CPS 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor and the department. Repeatable

## CPS 504 - Introduction to C++

College of Engineering and Computer Science 3 credit(s)
Object oriented programming in C++: classes, derived classes, data abstraction, inheritance, and access control. Substantial programming assignments. For students not majoring in computer science.
PREREQ: CPS 196

## CPS 506 - Introduction to C

College of Engineering and Computer Science 3 credit(s)
Programming in C: data types, control structures; the preprocessor; arrays and pointers. Substantial programming assignments. For students in computer science.

## Computer Engineering

CSE 261 - Digital Logic Design
College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Number representations, Boolean Algebra, logic minimization, memory circuits, counters, state diagrams, state machine design, arithmetic circuits, and asynchronous circuits. Logic simulators will be used to demonstrate and provide students with design activities.

[^11]implementation. Structural and RTL description of digital system using VHDL/Verilog. Simulation and verification of combinational and sequential logic. Digital system design, including coding, testing, synthesis, troubleshooting and documentation.

## CSE 280 - International Course

## College of Engineering and Computer Science

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## CSE 281 - Computer Organization \& Assembly Language

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Processor organization, addressing, fetch/execute cycle, instruction set, stacks, traps and interrupts. Machine language. Assemblers, macros, and subroutines.
PREREQ: ECS 102

## CSE 282 - System Software Design

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Real-time aspects of assembly-language
programming for complex systems with shared data and concurrent input/output. Input/ output requirements and architecture, interrupts, buffering, concurrency of operations, and memory management.
PREREQ: CSE 281

## CSE 283 - Introduction to ObjectOriented Design

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Present fundamental software design concepts of functional decomposition and object-oriented design. Use both C++ and Java to implement design projects which will be completed to demonstrate the design concepts. PREREQ: ECS 102

## CSE 351 - Mathematical Analysis of Digital Systems

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Techniques for the performance evaluation of computer systems. Simulation, analytical, and measurement techniques. Analytical techniques include evaluation of algorithms, scheduling algorithms, and independent and concurrent processes.

PREREQ: CSE 281

## CSE 381 - Computer Architecture

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Data representation, memory hierarchies, protection, specialized processors, multiple computers, performance evaluation, and reliability. PREREQ: CSE 261

## CSE 382 - Algorithms \& Data Structures

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Data structures and algorithms implemented in high-level language. Nonnumeric processing, including database management. Types, structures, pointers, linked lists, recursion, iteration, retrieval, pattern recognition, and context processing.
PREREQ: CSE 283

## CSE 384 - Systems Programming

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Study of real-world computing environment, especiall C language over Linux. Use of standard library and operating system facilities for memory management, control flow, I/O, concurrent programming, etc., will be emphasized. Shell commands and shell scripting.
PREREQ: CSE 281 OR CSE 283

## CSE 386 - Principles of Computer

 System DesignCollege of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Crosslisted with: CIS 386 Fundamental design principles for computer and information systems. Concurrency, race conditions, complexity, modularity, abstraction, layering, hierarchy, iteration, emergent properties, organization, virtualization, performance, atomicity, fault tolerance, consistency, and security. PREREQ: CIS 351 OR CSE 382

## CSE 397 - FPGA and Microcontroller Design Laboratory

## College of Engineering and Computer Science

 3 credit(s) At least $1 x$ fall or spring Experimental methods using test equipment. Logic-circuit design and testing using a Hardware Description Language and FPGAs. Microcontroller architecture, programming, interfacing, and communication with analog and digital components.PREREQ: CSE 261 AND ELE 231

## CSE 398 - Embedded and Mobile Systems Laboratory

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Design and testing of Embedded Systems with an operating system. Rapid Prototyping and design methods. Interfacing and network communication with mobile devices.
PREREQ: CSE 397

## CSE 400 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## CSE 440 - Topics in Mobile Programming

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: CIS 440
Double Numbered with: CSE 640
A variety of subjects surveyed or a particular subject in depth. Additional coursework required of graduate students.
PREREQ: CIS 351 OR CSE 382
Repeatable 2 time(s), 9 credits maximum

## CSE 444 - Mobile Application Programming

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Crosslisted with: CIS 444
Double Numbered with: CSE 651 Development of applications for different mobile devices. Creating effective user interfaces, efficient use of persisitent storage, network services, GPS, maps and sensors. Additional work required of graduate students.

## CSE 458 - Data Networks: Basic Principles

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring
Crosslisted with: CIS 458, ELE 458
Data communication networks, multilayer network architecture, data transmission fundamentals, network protocols, local and wide area networks, transport and application protocols.

## CSE 464 - Introduction to VLSI Design

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: ELE 464
MOS VLSI technologies. CMOS digital circuits. Layout design. Simulation. Realization of digital subsystems-adders, memory, etc. Opportunities for chip fabrication and testing.

PREREQ: CSE 261

## CSE 471 - Introduction to Embedded System Design

College of Engineering and Computer Science 3 credit(s) stem specification and architecture modeling; components of embedded systems; CPU, ASIC, control systems, interfacing peripherals; embedded computing platforms and real-time operating systems.
PREREQ: CSE 382

## CSE 482 - Principles of Software Engineering

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Software life cycle; requirements and tools; informal and formal specifications; design methodologies; structural and functional testing; models for reliability and cost. Course project required.
PREREQ: CSE 382 AND CIS 321

## CSE 483 - C\# and Windows <br> Programming

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Design and implementation of Windows 32-
bit applications. Windows API techniques and Windows MFC techniques will be presented. This is a projects course.
PREREQ: CSE 382 OR CIS 351

## CSE 484 - Introduction to Computer and Network Security

## College of Engineering and Computer Science

 3 credit(s)Crosslisted with: CIS 483
Operating system security. Authentication. Access control. Program vulnerabilities. Malicious code. Secure programming principles. TCP/IP protocols, vulnerabilities, attacks, and countermeasures. Firewalls. Intrusion detection. Secret-key and Public-key cryptography. One-way has function. Digital Signature.
PREREQ: CIS 486 OR CSE 486

## CSE 486 - Design of Operating Systems

## College of Engineering and Computer Science

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CIS 486
Design and implementation of modern operating systems. Resource management and protection of CPU, memory, and storage. File systems. Input/ output. Concurrent process implementation.
Process synchronization. Networking. PREREQ: (CIS 341 AND CIS 342 AND CIS 351) OR (CSE 281 AND CSE 382)

## CSE 487 - Access Control, Security and Trust

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CIS 487
Analytical/logical basis for trusting systems. Access requests, authorizations, certificates, credentials, jurisdiction, and delegation. Applications include distributed access control, process isolation and sharing, and access policies.
PREREQ: CIS 275

## CSE 488 - Introduction to Internet Security

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Crosslisted with: CIS 488
Network attack techniques and methods to defend them. Topics include vulnerabilities of TCP/ IP protocols, denial of service attacks, intrusion detection, firewalls, tracing the source of attacks, anonymous communication, IPsec, virtual private network, and PKI.
PREREQ: CIS 486 OR CSE 486

## CSE 489 - Web System Architecture and Programming

## College of Engineering and Computer Science

 3 credit(s) At least 1 x fall or spring Issues involved in architecting and programming Web servers and clients. Topics include Java Socket Programming; Java Thread Programming; HTTP; Apache HTTP Server; PHP/Python scripting; Java Servlets; JSP.PREREQ: CIS 351 OR CSE 382

## CSE 491 - Senior Design Project I

College of Engineering and Computer Science 1 credit(s) At least $1 x$ fall or spring Design methodology and presentation techniques for one extensive project created by a team of students to be completed in the follow-up course. Must be taken in sequence with CSE 492. PREREQ: CSE 398

## CSE 492 - Senior Design Project II

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Prototyping, construction, and demonstration skills for one extensive project created by a team of students. Must be taken in sequence with CSE 491.

PREREQ: CSE 491

## CSE 497 - Senior Design Project

College of Engineering and Computer Science 1-4 credit(s) Every semester Integrates skill in analysis, design, and presentation through one extensive project
selected from a list generated by course advisors. Repeatable

## CSE 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## CSE 561 - Digital Machine Design

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Behavioral and structural design methods and examples using a hardware description language (VHDL). Control, arithmetic, bus systems, memory systems. Logic synthesis from hardware language descriptions.
PREREQ: CSE 261

## CSE 565 - Introduction to VLSI Testing and Verification

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Techniques for validating the correctness of the logical and physical implementation of a digital system in two independent modules: (1) functional verification, and (2) test and validation. PREREQ: CSE 261

## CSE 571 - Switching Theory <br> College of Engineering and Computer Science 3 credit(s)

## CSE 581 - Introduction to Database Management Systems

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring DBMS building blocks; entity-relationship and relational models; SQL/Oracle; integrity constraints; database design; file structures; indexing; query processing; transactions and recovery; overview of object relational DBMS, data warehouses, data mining.
PREREQ: CSE 382 OR CIS 351

## CSE 583 - Systems Assurance Seminar

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CIS 583
Basic terminology of assurance and cryptography.
Social and privacy issues of assurance. Ethics in computing. Legal aspects and implications of system assurance. Weekly presentations by external and internal speakers.

[^12]Compiling or interpreting computer languages. Lexical analysis, grammars, parsing, intermediate code design, semantic processing, optimizing, error processing, and diagnostic tools. Senior or graduate standing in computer engineering. PREREQ: CSE 382

## CSE 591 - Special Problems in

 Computer Systems Engineering
## College of Engineering and Computer Science

1-4 credit(s) Upon sufficient interest
Students work on special projects. Instructors present new or special material. Repeatable 29 time(s), 30 credits maximum

## Electrical \& Computer Engineering

## ECE 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Engineering and Computer Science

## ECS 100 - Selected Topics

College of Engineering and Computer Science
1-6 credit(s) At least $1 x$ fall or spring
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable 11 time(s), 36 credits maximum

## ECS 101 - Introduction to Engineering and Computer Science

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Gateway course: Discussion of disciplines within the college, technical communication, presentation of technical results, professional behavior, ethics, problem solving, modeling, and data analysis. Laboratory topics: computers, computer language, and software packages.

## ECS 102 - Introduction to Computing

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Computing concepts. Principles of programming. Applications of computing concepts to problem solving in engineering and computer science. Laboratory topics will include problem solving projects from various disciplines within the college.

## ECS 104 - Engineering Computational Tools

## College of Engineering and Computer Science

3 credit(s) At least 1x fall or spring Elementary numerical techniques for root finding, sets of equations, curve fitting, differentiation, integration. Programming concepts: conditional branching, loops, etc. Examples of engineering calculations. Use of Excel and Matlab. COREQ: MAT 295

## ECS 105 - LCS SummerStart Supplemental Math Workshop

College of Engineering and Computer Science 1 credit(s) Every semester
Workshop designed to supplement the theory taught in math courses. Design problems will incorporate course work. Limited enrollment/ special permission.
Repeatable 7 time(s), 8 credits maximum

## ECS 109-ECS SummerStart Seminar

College of Engineering and Computer Science
1 credit(s) Only during the summer Designed to assist first-year students with their transition from high school to the University setting. Introduction of resources that will assist in the student's academic, social, cultural, and personal development through interactions with various representatives.

## ECS 110 - Introduction to Engineering Mathematics

College of Engineering and Computer Science 3 credit(s) Only during the summer This course brings together mathematics and engineering by quantifying and interpreting rates of change through the analysis of linear and nonlinear phenomena and how these phenomena change with respect to time.

## ECS 114 - Academic Excellence Workshop for Pre-Calculus

College of Engineering and Computer Science 1 credit(s) At least 1x fall or spring Designed to supplement the theory taught in precalculus. Problems will incorporate course work. The computational component is designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: MAT 194
Repeatable 2 time(s), 3 credits maximum

## ECS 115 - Academic Excellence Workshop for Calculus I

College of Engineering and Computer Science 1 credit(s) Every semester Designed to supplement the theory taught in Calculus I. problems will incorporate course work.

The computational component is designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: MAT 295
Repeatable 2 time(s), 3 credits maximum

## ECS 116 - Academic Excellence Worksho for Calculus II

## College of Engineering and Computer Science

1 credit(s) Every semester
Designed to supplement the theory taught in
Calculus II. Problems will incorporate course work.
The computational component is designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: MAT 296
Repeatable 2 time(s), 3 credits maximum

## ECS 117 - Academic Excellence Workshop for Calculus III

College of Engineering and Computer Science
1 credit(s) Every semester
Designed to supplement the theory taught in Calculus III. Problems will incorporate course work. The computational component is designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: MAT 397
Repeatable 2 time(s), 3 credits maximum

## ECS 122 - Academic Excellence Workshop for Intro. to Computing

College of Engineering and Computer Science 1 credit(s) At least 1x fall or spring Designed to supplement the material taught in Introduction to Computing. Problems will incorporate course work and are designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: ECS 102
Repeatable 2 time(s), 3 credits maximum

## ECS 125 - Survey of Engineering Problems

## College of Engineering and Computer Science

2-3 credit(s) Irregularly
Current design and research problems in engineering presented by faculty members actively working on these problems. Opportunities for student participation and individual project.

## ECS 200 - Selected Topics

College of Engineering and Computer Science
1-6 credit(s) At least $1 x$ fall or spring
Exploration of topics not covered by the standard curriculum but of interest to faculty and students in a particular semester.
Repeatable 11 time(s), 36 credits maximum

## ECS 201 - Academic Excellence Workshop for Statics

College of Engineering and Computer Science
1 credit(s) At least $1 x$ fall or spring
Designed to supplement the theory taught in the
static (ECS 221) course. Design problems will incorporate course work. Limited enrollment/ special permission.
COREQ: ECS 221
Repeatable 2 time(s), 3 credits maximum

## ECS 202 - Academic Excellence Workshop for Dynamics

College of Engineering and Computer Science
1 credit(s) At least 1 x fall or spring
Designed to supplement the theory taught in the dynamics course (ECS 222). Design problems will incorporate course work. Limited enrollment/ special permission.
COREQ: ECS 222
Repeatable 2 time(s), 3 credits maximum

## ECS 203 - Introduction to Technology

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Crosslisted with: STS 203
Basic engineering principles behind some of today's rapidly changing technologies. The capabilities, limitations, and application of these technologies to audio and TV systems, CD players, communications' satellites, radar, computers, and the electric power system. For nonspecialists.

## ECS 204 - Mathematical Programming for Engineers

College of Engineering and Computer Science
1 credit(s) At least 1x fall or spring
Technical computing environment such as MATLAB; trigonometry and complex numbers; arrays and array operations; mathematical functions and applications; data analysis; selection programming; vectors; matrices and linear algebra; curve fitting and interpolation; integration and differentiation; symbolic processing.

## ECS 205 - Academic Excellence Workshop for Thermodynamics

College of Engineering and Computer Science
1 credit(s) At least $1 x$ fall or spring
Designed to supplement the material taught in Thermodynamics. Problems will incorporate course work and are designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: MAE 251
Repeatable 2 time(s), 3 credits maximum

## ECS 206 - Academic Excellence Workshop for Mass \& Energy Balances

College of Engineering and Computer Science
1 credit(s) At least $1 x$ fall or spring
Designed to supplement the material taught
in Mass \& Energy Balances. Problems will incorporate course work and are designed to reinforce the understanding of concepts through a series of repetitive exercises.
COREQ: CEN 231
Repeatable 2 time(s), 3 credits maximum

## ECS 221 - Statics

## College of Engineering and Computer Science

 3 credit(s) At least 1 x fall or spring Fundamentals of static equilibrium. Vector algebra. Forces, moments, equivalent force systems. Free body diagrams and equilibrium problems in two and three dimensions. Analysis of structures and machines. Centroids and moments of inertia.PREREQ: PHY 211 OR PHY 215
COREQ: MAT 296

## ECS 222 - Dynamics

## College of Engineering and Computer Science

 3 credit(s) At least 1x fall or spring Dynamics of a particle. Newton's law and D'Alembert's principle. Plane motion. Cartesian, polar, and local coordinates. Energy and momentum methods. Motion of a rigid body. Review of vector algebra and moments of inertia. PREREQ: MAT 296 AND ECS 221
## ECS 290 - Independent Study

College of Engineering and Computer Science 1-6 credit(s)
In depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## ECS 301 - Understanding Contemporary Technology

## College of Engineering and Computer Science

 3 credit(s) IrregularlySurvey of significant areas of technology: scientific bases, operating principles, physical capabilities and performance, economic limitations, social impact. Areas include: fuel, energy, materials, pollution control, environmental modification. May be taken in either order with 302.

## ECS 302 - Understanding Contemporary Technology

College of Engineering and Computer Science 3 credit(s) Irregularly
Survey of significant areas of technology: scientific bases, operating principles, physical capabilities and performance, economic limitations, social
impact. Areas include: fuel, energy, materials, pollution control, environmental modification.

## ECS 325 - Mechanics of Solids

College of Engineering and Computer Science 4 credit(s) Every semester
Theory of deformation, stress, stress resultants, transformation. Elastic and inelastic constitutive behavior. Equilibrium. Tension and torsion of bars; flexure and shear of beams; pressure vessels. Thermoelasticity. Elastic and inelastic stability. Energy methods.
PREREQ: ECS 221
COREQ: MAT 397
ECS 326 - Engineering Materials, Properties, and Processing
College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Introduction to the properties and applications of engineering materials with emphasis on structure-property-processing relationships; fundamentals of structure, properties, and processing; materials selection for design; case studies of specific engineering applications.

## ECS 353 - Automotive Technology for Non-Engineers

College of Engineering and Computer Science 3 credit(s) Irregularly
A study of the modern automobile, using a recent model car as a laboratory example. Description and demonstration of engines, transmissions, body, suspension, brakes, steering, safety equipment, and fuel systems. Federal Motor Vehicle Standards.

ECS 354 - Green Technology and Sustainability

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Energy consumption, climate change and global warming. The green movement. Current and alternative energy sources. Technologies for energy generation, conversion and storage. Sustainable development. Green economy. Political, economic and social aspects of green practices. Permission of instructor.

## ECS 365 - Engineering Peer Mentor Forum

College of Engineering and Computer Science 1 credit(s) At least 1x fall or spring
Designed to give Peer Mentors the opportunity to discuss issues and concerns within their weekly group meetings. Peer Mentors will work as a group to discuss, analyze, and problem solve advising and first year transition issues.
Repeatable 2 time(s), 3 credits maximum

## ECS 370 - Professional Practice

College of Engineering and Computer Science
0 credit(s) Every semester
Full-time practical engineering or computer science work experience, with a participating employer, that is directly related to the student's field of study and is of a semester's duration. Student must be in good standing in the College of Engineering and Computer Science Cooperative Education Program.
Repeatable

## ECS 371 - International Professional Practice

## College of Engineering and Computer Science

 0 credit(s)A supervised work experience in a laboratory at one of several European universities near an SU Abroad center. Offered only overseas through Syracuse University Abroad.

## ECS 375 - Academic Excellence Facilitator Forum

College of Engineering and Computer Science 1 credit(s) Every semester
Designed to give facilitators the opportunity to discuss issues and concerns within their weekly workshop. Facilitators will work as a group to discuss, analyze, and problem solve participant issues.
Repeatable 7 time(s), 8 credits maximum

## ECS 391 - Legal Aspects of Engineering and Computer Science

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest Legal issues related to engineering and computer science are investigated using case studies, research projects, and term papers. Topics include patents, copyright, licenses, trade secrets, technology transfer, computer crime, contracts, and product liability.

## ECS 392 - Ethical Aspects of Engineering and Computer Science

College of Engineering and Computer Science 3 credit(s) Every semester Ethical issues related to engineering and computer science studied, including professionalism, collective and individual moral responsibility, codes of ethics, whistle blowing, conflict of interest, pluralism in the workplace, product liability, and employer-employee expectations.

## ECS 400 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s)
Exploration of engineering and computer science
topics not covered by the standard curriculum but of interest to faculty and students in a particular semester.
Repeatable

## ECS 401 - Spec. Projects-Soling Program

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Projects sponsored by the greater University community are completed by interdisciplinary teams in consultation with a faculty advisor. Open to juniors and seniors.

## ECS 441 - Leonardo da Vinci: Artist and Engineer

College of Engineering and Computer Science
4 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: HOA 425
Interdisciplinary exploration of the life and work of Leonardo da Vinci (1452-1519). Supplemented by required field trip to Europe. Special application required.

## ECS 470 - Professional Practice

College of Engineering and Computer Science 0 credit(s) Every semester Full-time practical engineering or computer science work experience, with a participating employer, that is directly related to the student's field of study and is of one semester's duration. Repeatable

## ECS 480 - International Course

## College of Engineering and Computer Science

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## ECS 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable
ECS 498 - Concepts \& Issues of Tech.
College of Engineering and Computer Science 3 credit(s) Irregularly
Role of engineering in modern society. Selection of criteria. Methods of problem analysis and
decision making. Case studies.

## ECS 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## ECS 511 - Sustainable Manufacturing

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Visions of sustainable manufacturing, systems approach to sustainable product development and design, manufacturing processes and systems, alternative energy systems for manufacturing, innovation and entrepreneurship opportunities. Senior standing.
PREREQ: MFE 331

## ECS 525 - Probability for Engineers

College of Engineering and Computer Science 3 credit(s) Irregularly
Sample spaces, events, and probabilities. Conditional probability and independence. Random variables, random vectors. Probability distributions and densities. Expectations. Momentgenerating functions. Introduction to data analysis. Engineering applications.

## ECS 526 - Statistics for Engineers

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Point estimation, confidence intervals, simple hypothesis testing, nonparametric tests, curve fitting and regression, analysis of variance, factorial experiments, and engineering applications.
PREREQ: ECS 525 OR MAT 521

## ECS 570 - Professional Practice

College of Engineering and Computer Science 0 credit(s) Every semester
Full-time practical engineering or computer work experience, with a participating employer, that is related to the student's field of study, and is of a semester's duration. May not be repeated.
PREREQ: ECS GRADUATE PROGRAM

## ECS 588 - Principles of Wind Turbines

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: CIE 588, MAE 588
Aerodynamics, performance, control, and electrical aspects wind turbines.
PREREQ: MAE 341
Engineering Physics

## ENP 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Electrical Engineering

## ELE 231 - Electrical Engineering Fundamentals I

## College of Engineering and Computer Science

 3-4 credit(s) Every semesterAnalysis of electric circuits. Resistive, reactive circuits. Independent, dependent sources. Network theorems, circuit reduction. Elements of transient and steady state circuit analysis. Power and energy considerations. Circuit simulation laboratory required for 4 credits.
PREREQ: MAT 295

## ELE 232 - Electrical Engineering Fundamentals II

College of Engineering and Computer Science 3 credit(s) Every semester
Frequency response, filters. Second order circuits. Semiconductors, diodes, bipolar junction transistors, field effect transistors, models, circuits. Operational amplifiers, models, circuits. Transformers, rotating machines. DC generators and motors. Alternators. AC motors.
PREREQ: ELE 231

## ELE 280 - International Course

College of Engineering and Computer Science
1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## ELE 291 - Electrical Engineering Laboratory I

## College of Engineering and Computer Science

1 credit(s) At least 1x fall or spring Electrical-instrumentation and measurement. Experimental methods in linear and nonlinear devices and circuits. One hour of recitation and one three hour laboratory a week.
COREQ: ELE 231

## ELE 292 - Electrical Engineering Laboratory II

College of Engineering and Computer Science
1 credit(s) At least 1x fall or spring

Continuation of ELE 291. Experimental methods and design with electrical circuits. SPICE circuit simulation. One hour recitation and one threehour laboratory a week.
PREREQ: ELE 291
COREQ: ELE 232

## ELE 312 - Control Systems for MAE

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: MAE 322
Review of Laplace transforms and z-transforms, system modeling, transfer functions, feedback, stability. Analysis and design using computer tools. Applications of controls to mechanical systems.
PREREQ: MAT 414 OR MAT 485
COREQ: MAE 321

## ELE 314 - Introduction to Power Engineering

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Electromagnetic fundamentals; three-phase system; transformers; electrical motors and generators; power systems.
PREREQ: ELE 231

## ELE 324 - Electromagnetics I

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Crosslisted with: PHY 424
Vector analysis, electrostatics, LaPlace's equation, dielectrics, magnetostatics, magnetic materials. PREREQ: MAT 397 AND (PHY 212 OR PHY 216)

## ELE 325 - Electromagnetics II

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Crosslisted with: PHY 425
Faraday's Law, displacement current, Maxwell's equations, plane waves, power flow in waves, reflection and transmission of waves, wave-guides, radiation, and antennas.
PREREQ: ELE 324 OR PHY 424

## ELE 331 - Digital Circuits and Systems

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring
Basic switching circuits and systems using diodes, bipolar and field-effect transistors. Integratedcircuit implementation of gates and counters. PREREQ: ELE 232

## ELE 333 - Analog Circuits

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring DC and small signal models of BJT and FET. Biasing of discrete circuits. Single-stage BJT and FET amplifiers. Voltage gain, current gain, input
and output impedances. Differential amplifiers. Frequency response.
PREREQ: ELE 231 AND ELE 232

## ELE 346 - Semiconductor Devices

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Physics of semiconductor devices. Energy bands. Electrons and holes. PN and metal semiconductor diodes. Characteristics, operation, properties and limitations of bipolar transistors, JFETS and MOSFETS. PNPN devices. Optoelectronic devices. PREREQ: PHY 212 OR PHY 216

## ELE 351 - System and Signal Analysis

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Signal and system analysis in continuous-time, discrete-time, and frequency domains. Fourier series, continuous and discrete Fourier transforms, z-transform, LaPlace transform. Engineering applications.
PREREQ: ELE 232 AND MAT 296

## ELE 352 - Digital Signal Processing

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Discrete time sequences and systems. Sampling. Discrete Fourier transform. z-transform. Finite impulse response (FIR) filters. Infinite impulse response (IIR) filters.
PREREQ: ELE 351

## ELE 391 - Digital Circuits Laboratory

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring
Digital circuit analysis and design using discrete and integrated components. Extensive halfsemester design project. Circuit simulation. One hour of recitation and two three-hour laboratories a week.
PREREQ: ELE 292
COREQ: ELE 331

## ELE 392 - Analog Circuits Laboratory

College of Engineering and Computer Science
3 credit(s) At least 1 x fall or spring
Analog circuit analysis and design using discrete and integrated components. Extensive half-
semester design project. Circuit simulation. One hour of recitation and two three-hour laboratories a week.
PREREQ: ELE 292
COREQ: ELE 333

## ELE 400 - Selected Topics

College of Engineering and Computer Science 1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester. Repeatable

## ELE 416 - Electromechanical Devices

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Principles of energy conversion that provide
the basis of operation for electrical machinery, meters, and other transducers. Rotating DC and AC machines.
PREREQ: ELE 232

## ELE 417 - Power Electronics

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: ELE 617
Semiconductor devices, switching power poles, switching analysis, topology selection and design, single phase and three phase rectifiers, inverters, and converters, feedback controllers and power supply. Additional work required of graduate students.
PREREQ: ELE 314

## ELE 418 - Sensors \& Measurements

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: ELE 618
Sensor signal domains, sensor classifications and architecture, sensor types, data acquisition methods, signal conversion methods, standards, introduction to metrology, measurement result processing, synchrophasor technology and applications. Additional work required of graduate students.

## ELE 424 - Fundamentals of Radio Frequencies and Microwaves

## College of Engineering and Computer Science

3 credit(s) At least $1 x$ fall or spring Transmission lines at high frequencies. Impedance matching. Network parameters. Basics of filters, couplers, amplifiers, oscillators, mixers, and antennas used in microwave communication systems. Basic microwave experiments. PREREQ: ELE 232

## ELE 425 - Microwave Engineering

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Transient analysis of TEM lines, time domain reflectometer. Parameters of coaxial, strip and microstrip lines. Scattering parameters. Coupled lines, waveguides, cavities. Experimental illustration of microwave engineering concepts. Use of network and spectrum analyzers. PREREQ: ELE 424

## ELE 431 - Analog Circuits and Systems

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Amplifiers using bipolar and field-effect transistors. Low- and high-frequency small-signal models. Multistage amplifiers, stabilization and noise considerations.
PREREQ: ELE 333

## ELE 452 - Digital Audio Signal Processing

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Double Numbered with: ELE 652 Course combines classroom theory with handson lab. Covers digital audio fundamentals, filter-design, DSP architecture, parallel assembly programming, circular buffers, processing music signals. Additional work required of graduate students.

## ELE 458 - Data Networks: Basic Principles

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: CIS 458, CSE 458 Data communication networks, multilayer network architecture, data transmission fundamentals, network protocols, local and wide area networks, transport and application protocols.

## ELE 464 - Introduction to VLSI Design

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Crosslisted with: CSE 464
MOS VLSI technologies. CMOS digital circuits. Layout design. Simulation. Realization of digital subsystems-adders, memory, etc. Opportunities for chip fabrication and testing.
PREREQ: CSE 261

## ELE 470 - Experience Credit

College of Engineering and Computer Science 1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## ELE 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## ELE 491 - Senior Design Project I <br> College of Engineering and Computer Science 1 credit(s) At least 1x fall or spring Design methodology and presentation techniques for one extensive project created by a team of students to be completed in the follow-up course. Must be taken in sequence with ELE 492.

## ELE 492 - Senior Design Project II

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Prototyping, construction, and demonstration skills for one extensive project created by a team of students. Must be taken in sequence with ELE 491
PREREQ: ELE 491

## ELE 499 - Honors Capstone Project

College of Engineering and Computer Science
1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## ELE 512 - Linear Control Systems

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
System representation, time and frequency domain analysis of linear systems, stability. Effects of feedback on system Performance. Controller design using root locus, Nyquist, and Bode methods.
PREREQ: ELE 351

## ELE 514 - Electric Power Systems

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Equivalent circuits for the components of a power system. Analysis of balanced and unbalanced polyphase systems. Symmetrical components and sequence networks. Fault studies, load-flow analysis, stability considerations.

## ELE 516 - Control of Robots

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Crosslisted with: CIS 543
Kinematics, dynamics, and control of mobile and/ or manipulator robots. Path planning, actuators, sensors, human/machine interface. Two hours lecture and two hours laboratory weekly. Design project.

## ELE 524 - Introduction to Applied Optics

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Geometrical optics, two-dimensional Fourier transforms and wave propagation, optical fibers,

Fresnel and Fraunhofer diffraction, interferometry, imaging and Fourier transforming properties of lenses, image processing, complex filters and holography. Includes laboratory: design and experiment.
PREREQ: ELE 324

## ELE 525 - Elctromgetc Compatability

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Introduction to electromagnetic compatibility (EMC). EMC requirements for electron systems. Nonideal behavior of circuit components. Signal spectra. Maxwell equations. Antenna theory. Control of radiated and conducted emissions. PREREQ: ELE 324 AND ELE 351

## ELE 530 - Electric Power Generation and Distribution

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Crosslisted with: NUC 530
Fundamental principles governing the electromechanical power conversion; transformer; generators; introduction to power distribution systems; reliability and safety issues related to power generation and delivery, particularly in nuclear power plants. 3

## ELE 541 - Integrated Circuits

College of Engineering and Computer Science 3 credit(s) Irregularly
Principles of design and processing of monolithic and hybrid integrated circuits. Current technology and its scientific basis.

## ELE 551 - Communication Systems

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Communications systems. Amplitude modulation techniques. Angle modulation or frequency modulation. Sampling and quantization of analog signals. Basic digital modulation techniques. Introduction to noise. System modeling evaluating performance using industry tools.
PREREQ: ELE 351

## ELE 553 - Communications Engineering

## College of Engineering and Computer Science

 3 credit(s) IrregularlyIntegration of networks and electronic devices into apparatus and systems for communications. Transmitters, receivers, antennas, modulation, noise, propagation.

## ELE 591 - Special Problems in Electrical Engineering

College of Engineering and Computer Science
1-4 credit(s) Upon sufficient interest

Students work on special projects. Instructors present new or special material. Repeatable

## ELE 599 - Electrical Engineering Laboratory IV

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring Comprehensive projects selected from the student's area of interest. One hour of consultation and six hours of laboratory a week. May be repeat for credit.
PREREQ: ELE 391
Repeatable

## Mechanical and Aerospace Engineering

## MAE 180 - International Course

College of Engineering and Computer Science 1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## MAE 184 - Engineering Graphics and Computer-Aided Design

## College of Engineering and Computer Science

 3 credit(s) At least 1x fall or spring Fundamentals of projections and intersections of surfaces. Dimensioning and tolerancing. Different solid and surface modeling techniques. Use of a computer-aided design system. Design problems. PREREQ: ECS 101
## MAE 251 - Thermodynamics

College of Engineering and Computer Science 4 credit(s) At least $1 x$ fall or spring
Basic concepts in engineering thermodynamics. Thermodynamic properties of solids, liquids, and gases. First and second laws of thermodynamics. Reversible and irreversible processes. Entropy equation. Energy analysis of basic cycles.
PREREQ: PHY 211 OR PHY 215

## MAE $\mathbf{3 0 0}$ - Selected Topics

College of Engineering and Computer Science 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MAE 312 - Engineering Analysis

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Analytical and numerical methods of engineering problem solving. Linear algebra, ordinary and partial differential equations. Applications include vibration theory, column buckling, steady and unsteady heat transfer, subsonic and supersonic potential flows, wave propagation in rods. PREREQ: ECS 104 AND MAT 485

## MAE 315 - Mechanical and Aerospace Engineering Laboratory

## College of Engineering and Computer Science

3 credit(s) At least 1x fall or spring Laboratory experiments in engineering and science topics. Introduction to statistical evaluation of data. Experiments will be selected from various topics including solid mechanics, fluid mechanics, digital signal processing and vibrations.
PREREQ: ECS 325
COREQ: MAE 341

## MAE 321 - Dynamics of Mechanical Systems

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Formulation of dynamics problems using Newton's Laws with an introductory study of analytical dynamics. Vibration of linear systems. Computational techniques for predicting system response.
PREREQ: ECS 222 AND ECS 325 AND MAT 485

## MAE 322 - Control Systems for MAE

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring
Crosslisted with: ELE 312
Review of Laplace transforms and z-transforms, system modeling, transfer functions, feedback, stability. Analysis and design using computer tools. Applications of controls to mechanical systems.
PREREQ: MAT 485
COREQ: MAE 321

## MAE 341 - Fluid Mechanics

College of Engineering and Computer Science 4 credit(s) At least 1x fall or spring Dimensional analysis. Hydrostatics. Bernoulli's equation. Control volume analysis. Basic equations in differential form. Inviscid incompressible flows. Viscous flows in pipes and ducts. Estimation of head losses in fluid systems. PREREQ: ECS 221 AND MAT 397 AND (PHY 211 OR PHY 215)

## MAE 355 - Fundamentals of Heat Transfer <br> College of Engineering and Computer Science <br> 4 credit(s) At least $1 \times$ fall or spring Principles of heat transfer: conduction, convection, and radiation. Thermal properties of materials. Boiling and condensation. Solutions of steady state and transient heat transfer problems. Design of heat exchange systems. <br> PREREQ: MAE 341 <br> COREQ: MAE 251

## MAE 373 - Analysis and Design of Structures

College of Engineering and Computer Science 4 credit(s) Irregularly
Elements of the plane theory of elasticity and strength of materials. Application to problems of mechanical and aerospace structures.

## MAE 415 - Mechanical and Aerospace Engineering laboratory III

College of Engineering and Computer Science 2 credit(s) Irregularly Experiments in composite structures and instrumentation performed in small groups.
Written and oral reports.

## MAE 430 - Introduction to Design Optimization

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Theory and use of numerical design optimization methods. Problem formulation, practical application, and result analysis. Unconstrained nonlinear problems, constrained linear and nonlinear problems, and multiobjective optimization. Extensive use of Matlab functions and programming.
PREREQ: MAT 397 AND MAT 414

## MAE 457 - Automotive Engineering for ECS Students

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring
An engineering study of the modern automobile, using a recent model car as a laboratory example. Analysis of engine, transmission, body, suspension, brakes, steering safety equipment, and fuel systems. FMVS Standards.
PREREQ: MAE 251

## MAE 480 - International Course

College of Engineering and Computer Science 1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's
practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## MAE 483 - Applied Environmental Acoustics and Noise Control

College of Engineering and Computer Science 3 credit(s) Irregularly
Double Numbered with: MAE 683
Introductory to environmental acoustics, sound propagation, psychoacoustics, noise criteria for design, noise sources, absorption, noise isolation, design of critical spaces, sound measurement, vibration isolation, product noise ratings, sound quality.
PREREQ: PHY 101

## MAE 486 - Fuel Cell Science and Technology

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Fuel cell thermodynamics; electrode kinetics; performance and efficiency; transport process; types of fuel cells; fueling issues, and fuel cell systems and applications will be covered. PREREQ: MAE 251

## MAE 490 - Independent Study

College of Engineering and Computer Science 1-6 credit(s)
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## MAE 499 - Honors Capstone Project

College of Engineering and Computer Science 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## MAE 510 - Nuclear Reactor Design, Operation and Safety

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: NUC 510
Principles of fission reactor analysis and design; reactor kinetics, operation and control; reactor thermo-fluid-dynamics; reactor safety; reactor accident case studies
PREREQ: NUC 201 AND MAE 551

## MAE 536 - Composite Materials

College of Engineering and Computer Science
3 credit(s) Even Academic Yr e.g. 2004-5 Design, analysis, and manufacturing of fiberreinforced composite materials. Emphasis is on
polymeric composites for general aerospace and automotive applications, and on ceramic matrix composites for hypersonic applications. PREREQ: ECS 325

## MAE 545 - Applications of Fluid Mechanics

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Selected topics in applied fluid mechanics, to be determined by the instructor. Tools employed include control volume analysis, Bernoulli equation, exact and simplified solutions of the Navier-Stokes equations, and test correlations. PREREQ: MAE 341

## MAE 548 - Engineering Economics and Technology Valuation

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: CIE 548
Value-based assessment and management of engineering/technology projects: equivalence; discounted cash flow; taxes/depreciation; financial statements. Risk-adjusted valuation: risk/uncertainty in staged projects; Monte Carlo simulations; decision trees; real options; project portfolio management.
PREREQ: MAT 296

## MAE 551 - Energy Conversion

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: CIE 551
Energy demand and resources. Fundamentals of combustion. Power plants, refrigeration systems. Turbines and engines. Advanced systems. Direct energy conversion. Alternate energy sources. Energy storage. Costs and environmental impact. PREREQ: MAE 251

## MAE 552 - Building Environmental Measurements and Controls

College of Engineering and Computer Science 3 credit(s)
Crosslisted with: CIE 552
Fundamentals of building ventilating methods for measuring and controlling indoor environmental conditioning, thermal comfort, and indoor air quality.
PREREQ: MAE 341 AND MAE 355

## MAE 553 - HVAC Systems Analysis and Design

College of Engineering and Computer Science 3 credit(s)
Crosslisted with: CIE 553
Fundamentals of moist air properties, basic air conditioning processes, heat transfer in building structures, heating and cooling load calculations,
and air distribution systems.
PREREQ: MAE 251

## MAE 554 - Principles of Refrigeration

## College of Engineering and Computer Science

## 3 credit(s)

Basic thermodynamic analysis of refrigeration cycles. Components selection. Environmental issues and recent developments in the refrigeration and the air conditioning industry. PREREQ: MAE 251

## MAE 571 - Applications of Computational Fluid Dynamics

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring Use of commercial Computational Fluid Dynamics (CFD) softwares to solve problems of practical interest. Modeling of fluid/thermal systems. Introduction to CFD algorithms. Simulation, evaluation, and interpretation of CFD results. PREREQ: MAE 341

## MAE 573 - Application of Finite Element Analysis

College of Engineering and Computer Science 3 credit(s)
Formulation of mechanics and heat transfer problems by finite element analysis. Application of the finite element method using commercial software in the static and dynamic analysis of mechanical components.
PREREQ: ECS 325 AND MAT 485

## MAE 585 - Principles of Turbomachines

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: AEE 685, MEE 685
Fluid dynamics and thermodynamics of turbomachines. Performance characteristics and analysis of axial and radial turbomachines. Cascade theory. Radial equilibrium equation. Meridional flow analysis. Three dimensional flow characteristics of turbomachines.
PREREQ: MAE 251 AND MAE 341

## MAE 587 - Design of Solar Energy System

## College of Engineering and Computer Science

 3 credit(s) At least $1 x$ fall or spring Fundamentals of solar radiation, collectors and storage. Design of solar space heating, cooling; water heating systems. Study of solar electric systems. Economics of solar design; application to heat pumps, energy conservation techniques. PREREQ: MAE 251
## MAE 588 - Principles of Wind Turbines

College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

Crosslisted with: CIE 588, ECS 588
Aerodynamics, performance, control, and electrical aspects wind turbines.
PREREQ: MAE 341

## Mechanical Engineering

## MEE 270 - Experience Credit

College of Engineering and Computer Science
1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## MEE 290 - Independent Study

College of Engineering and Computer Science 1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by permission of supervising instructor or instructors and the department.
Repeatable

## MEE 332 - Introduction to Machine Design and Manufacturing

College of Engineering and Computer Science 4 credit(s) At least 1 x fall or spring Introduction to the design process. Design, analysis, and application of machine components such as springs, gears, shafts, keys, drive chains, and belts. Manufacturing processes required to produce machine components. Open-ended design projects required.
PREREQ: ECS 222 AND ECS 325

## MEE 416 - Mechanical Engineering Laboratory

College of Engineering and Computer Science
1 credit(s) At least 1x fall or spring
Experiments in air conditioning, refrigeration, and turbomachines performed in small groups. Written and oral reports.
PREREQ: MAE 251 AND MAE 315 AND MAE 341 AND MAE 355

## MEE 454 - Air Conditioning

College of Engineering and Computer Science 3 credit(s) Irregularly
sychro-metrics, air conditioning for human comfort and industrial processes, heating and cooling loads, air distribution, a/c systems, design project. PREREQ: MAE 251

## MEE 456 - Applications of Heat Transfer

College of Engineering and Computer Science 3 credit(s) Irregularly
Applications of principles of heat transfer to analysis and design of heat-exchange and dissipation devices. Boiling and condensation heat transfer. Aspects of environmental heat transfer, such as thermal pollution and its control. PREREQ: MAE 355

## MEE 470 - Experience Credit

College of Engineering and Computer Science
1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## MEE 471 - Synthesis of Mechanical Systems I

## College of Engineering and Computer Science

3 credit(s) Every semester
First capstone design course. Students formulate open-ended design projects. Selected projects require assimilation of knowledge from several areas within mechanical engineering. Oral and written reports. May not be taken concurrently with MEE472. Senior standing required.
PREREQ: MEE 332 AND MAE 184

## MEE 472 - Synthesis of Mechanical

 Systems IICollege of Engineering and Computer Science
4 credit(s) At least 1x fall or spring
Continuation of MEE 471.
PREREQ: MEE 471

## MEE 473 - Engineering Design Analysis

College of Engineering and Computer Science 3 credit(s) Irregularly
Design problems that integrate the principles of diverse engineering courses. Use of ANSYS as a modeling and analysis tool.

## MEE 475 - Special Design Project

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Special design project carried out by student under supervision of staff member.

## MEE 480 - International Course

College of Engineering and Computer Science
1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's
practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## MEE 486 - Introduction to Nuclear Power

## College of Engineering and Computer Science

3 credit(s) Irregularly
Application of engineering principles to nuclear power reactors. Relation of nuclear power to present and future world energy sources. Elements of reactor theory. Power removal, utilization, and economics. Design considerations and examinations of nuclear power plants.
PREREQ: MAE 251

## MEE 487 - Design of Solar-Energy Systems

## College of Engineering and Computer Science

3 credit(s) Irregularly
Solar radiation, collectors, and storage. Design of solar space heating, cooling; water-heating systems. Solar electric systems. Economics of solar design. Applications of heat pumps, energy conservation techniques.
PREREQ: MAE 251

## MEE 490 - Independent Study

College of Engineering and Computer Science
1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## MEE 499 - Honors Capstone Project

## College of Engineering and Computer Science

 1-3 credit(s)Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## MEE 524 - Microprocessors in Mechanical and Manufacturing Engineering

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Introduction to the microprocessor and its various configurations used in controlling machine operations, data acquisition, etc. Project-oriented work involving program development in machine, assembly, and basic languages. Micro-computers used for off-line program development. Not open to electrical and computer engineering students.

## MEE 571 - Computer Aided Design

College of Engineering and Computer Science
3 credit(s) At least $1 x$ fall or spring
Use CAD software and hardware in the solution of mechanical engineering problems. Computer graphics, computer aided geometry (space curves, splines, patches) design, solid modeling, optimization and an introduction to finite element method.
PREREQ: MAE 184 AND MAT 485

## MEE 584 - Noise from Industrial Flow Systems

## College of Engineering and Computer Science

 3 credit(s) IrregularlyBasic fluid mechanics and acoustics. Noise generation by fluid flows and their interaction with solid bodies. Types of noise sources. Analysis and control of such flow noise sources in manufacturing, transportation, propulsion, power generation, and industrial control systems. PREREQ: MAE 341

MEE 585 - Fuel \& Energy Utilization
College of Engineering and Computer Science 3 credit(s)

## Manufacturing Engineering

## MFE 326 - Probability and Statistical Methods for Engineers

College of Engineering and Computer Science 4 credit(s) Irregularly
Theory of probability, sampling, estimation, hypothesis testing, quality control techniques. Experimental design and analysis.

## MFE 331 - Manufacturing Processes

College of Engineering and Computer Science 3 credit(s) At least 1 x fall or spring Fundamentals of casting, forming, machining, joining, assembly, and other manufacturing processes. Measurement and gauging, integration of manufacturing with other disciplines, design for manufacture, the manufacturing organization, laboratory experience.
PREREQ: MAE 184

## MFE 429 - System Modeling and Optimization

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest
Introduction to system modeling and optimization techniques and their applications. Topics include linear programming and its extensions, integer programming, dynamic programming, stochastic modeling, simulation and other system modeling techniques.
PREREQ: MAT 397 AND MAT 521

## MFE 436 - Robotics in Manufacturing

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Topics include requirements for robotic application, mechanical considerations, and effectors, sensors, software, applications, and optimization of robotic systems. Laboratory experiments included.

## MFE 453 - Production Planning and Control

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest Problems in designing and controlling manufacturing facilities. Layout design, line balancing, production planning, sequencing, material-requirements planning, group technology, and quality control.
PREREQ: MFE 326 AND MFE 429

## MFE 470 - Experience Credit

College of Engineering and Computer Science
$1-3$ credit(s)
Participation in a discipline or subject-related experience. Students will be evaluated by written and/or oral report.
Repeatable

## MFE 472 - Synthesis of Manufacturing Systems

## College of Engineering and Computer Science

4 credit(s) Irregularly
Formulation and execution of manufacturing engineering design projects requiring information from several disciplines.

## MFE 534 - Statistical Quality Control

College of Engineering and Computer Science 3 credit(s) Irregularly
Controlling product quality through the control of the manufacturing process and acceptance sampling. Industrial project required.
PREREQ: MFE 326

## MFE 535 - Introduction to Manufacturing Systems

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Numerical control (NC), computer assisted NC programming, NC programming using CAD/ CAM system, robot programming, manufacturing automation protocol (MAP), manufacturing cells, flexible manufacturing systems (FMS), and computer integrated manufacturing (CIM) systems. Laboratory assignments. PREREQ: MAT 296

## MFE 557 - Management Decisions in Manufacturing

College of Engineering and Computer Science
3 credit(s) Irregularly
General management issues regarding the primary importance of manufacturing technology, economic decision making, organization theory, and the management of manufacturing technology.

## MFE 595 - Multidisciplinary Analysis and Design

College of Engineering and Computer Science 3 credit(s) Irregularly Interdisciplinary subjects related to engineering, information technology, networking, AI and HTTP://WWW-based tools. The objective is to use different MAD tools in the product realization process.
PREREQ: MEE 571

## Materials Science

## MTS 421 - Introduction to Ceramics

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Ceramics as a class of materials composed of inorganic, nonmetallic components. Development, utilization, and control of properties of ceramic materials.

## MTS 431 - Physical Metallurgy

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Properties of metals and alloys. Transformations and their consequences in practical systems.

## MTS 471 - Materials for Engineering Applications

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Deformation and fracture of metals, ceramics, and polymers. Materials for applications at high temperatures, corrosive environments, high strengths, and light weights. Prepares students to select materials for certain engineering functions.

## MTS 533 - Introduction to Theory of Materials

## College of Engineering and Computer Science

3 credit(s) Irregularly
Theoretical concepts that describe the electronic structure of crystals. Models of electron and ion interactions to correlate electronic, magnetic, and thermal properties of metals, alloys, and compounds.

MTS 537 - Introduction to Diffusion in Solids

## College of Engineering and Computer Science

3 credit(s) Irregularly
Diffusion mechanisms, diffusion equations and their methods of solution.

## MTS 570 - Nondestructive Testing

College of Engineering and Computer Science 3 credit(s) Irregularly
Determination of defects in structural materials. Nondestructive inspection methods include noise emission techniques, X -ray radiography, leak detectors, ultrasonics, magnetic and electrical methods.
Repeatable

## MTS 581 - X-Ray Diffraction

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Kinematic theory of $X$-ray diffraction and its applications in materials science. Experimental methods. Integrated intensity, line broadening, and peak shift analyses. Crystal structure. X-ray effects of imperfections in crystals.

## Nuclear Energy Track

## NUC 301 - Introduction to Nuclear Engineering and Reactor Safety

College of Engineering and Computer Science 3 credit(s) At least 1x fall or spring Importance of nuclear energy to society. Nuclear and radiological engineering. Nuclear energy production. Radioactive waste. Reactor safety PREREQ: PHY 212

## NUC 510 - Nuclear Reactor Design, Operation and Safety

College of Engineering and Computer Science 3 credit(s) Upon sufficient interest Crosslisted with: MAE 510
Principles of fission reactor analysis and design; reactor kinetics, operation and control; reactor thermo-fluid-dynamics; reactor safety; reactor accident case studies.

## NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation

## College of Engineering and Computer Science

3 credit(s) Upon sufficient interest
Crosslisted with: CEN 520
Radiochemistry for nuclear reactors and nuclear fuel reprocessing; nonproliferation issues through detection and monitoring, nuclear fuel reprocessing and design, waste vitrification and storage facilities, safety issues in nuclear fuel reprocessing.

PREREQ: NUC 301

## NUC 530 - Electric Power Generation and Distribution

College of Engineering and Computer Science 3 credit(s) At least $1 x$ fall or spring Crosslisted with: ELE 530
Fundamental principles governing the electromechanical power conversion; transformer; generators; introduction to power distribution systems; reliability and safety issues related to power generation and delivery, particularly in nuclear power plants. 3

## NUC 540 - Experiential Studies in Nuclear Technology

College of Engineering and Computer Science
3 credit(s) Upon sufficient interest Crosslisted with: CEN 540
Introduction to experimental methods, procedures and research techniques through projects at participating government facilities, industrial entities or Syracuse University. PREREQ: NUC 301 AND (NUC 510 OR NUC 520)

## Systems \& Information Science

## SIS 100-Selected Topics

College of Engineering and Computer Science 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SIS 101 - SIS Freshman Forum

College of Engineering and Computer Science 1 credit(s) At least 1x fall or spring Introduction to the field of Systems and Information Science, with emphasis on the broad variety of applications programming. Survival skills appropriate to new students and budding professionals will also be covered.

## College of Engineering and Computer Science Faculty

Riyad S. Aboutaha, Associate Professor Ph.D., University of Texas at Austin, 1994 Structural design, evaluation, and rehabilitation; structural concrete and composites; infrastructure renewal
Jeongmin Ahn, Associate Professor Ph.D., University of Southern California 2006 Energy Conversion, Combustion, Thermal

Management, PowerMEMS
Benjamin Akih-Kumgeh, Assistant Professor PhD, McGill University, Canada, 2011
Combustion Physics \& Chemistry; Fuel Technology.
Ercument Arvas, Emeritus Professor
Ph.D., Syracuse University, 1983
RF/Microwave devices and circuits, electromagnetic scattering

Hossein Ataei, Prosessor of Practice Ph.D., University of Southern California, 2013 M.B.A. and Licensed Professional Engineer; Structural Engineering and Construction Project Management
Jurgen Babirad, Research Associate Professor M.S.A., University of Notre Dame, 1988

Rehabilitation technology
Rebecca Bader, Associate Professor Ph.D. Materials Science, Oregon State University, 2006
Drug delivery; Molecular biotechnology; Nanotechnology
Thomas Barnard, Edelstein Professor of Practice Ph.D. Syracuse University, 1989
Adaptive Processing; Clutter Rejection; Systems Architecture

Karl R. Behnke, Adjunct
M.S., University of Houston at Clear Lake, 1991

Statistics and quality control
Shobha K. Bhatia, Professor, Laura J. and L. Douglas Meredith Professor
Ph.D., University of British Columbia, 1980 Geosynthetic applications, image processing, soil dynamics, geo-environmental

Howard A. Blair, Associate Professor
Ph.D., Syracuse University, 1980
Knowledge Representation and Automated, hybrid systems, formal methods and verification

Michelle Blum, Assistant Professor
PhD, University of Notre Dame, May 2012
Orthopedic implant development, polymer characterization and simulation of tribological contacts
Edward A. Bogucz Jr., Associate Professor Ph.D., Lehigh University, 1985
Fluid mechanics, heat transfer, numerical methods
Jesse Q. Bond, Assistant Professor
Ph.D. University of Wisconsin, Madison 200 Heterogeneous catalysis, Kinetics, Reaction engineering, and Alternative resource utilization
Tomislav Bujanovic, Associate Professor Ph.D. in Electrical and Computer Engineering, Western Michigan University, 2009 Distributed energy integration and control in Smart Grid; Dynamic optimization of grid operations; Demand response and ancillary services;Smart home network; Synchrophasor measurement technology; Smart Grid
communication; Smart Grid cybersecurity; Medical signal analysis; Motion estimation in time-varying images; Power Engineering;
Katie D. Cadwell, Assistant Professor, Undergraduate Chemical Engineering Program Director
Ph.D. University of Wisconsin, Madison 2007
Development of engineering faculty attitudes and pedagogy; Development of engineering student professional skills, K-12 engineering outreach

Frederick J. Carranti, Instructor
M.S.M.E., Syracuse University, 1994

Licensed professional engineer, energy system analysis, manufacturing processes
Joseph Chaiken, Professor, Chemistry
Ph.D. University of Illinois 1982
Spectroscopy
David G. Chandler, Associate Professor
Ph.D., Cornell University, 1998
Hydrology, soil physics, environmental monitoring
Stephen J. Chapin, Associate Professor
Ph.D., Purdue University, 1993
Operating systems, distributed systems, computer networking, computer security, system assurance
Biao Chen, Professor
Ph.D., University of Connecticut, 1999
Signal processing, Communication and Information Theory
C.Y. Roger Chen, Professor

Ph.D., University of Illinois, 1987 CAD for
VLSI physical synthesis and multimedia information technologies
Ruth Chen, Professor of Practice
Ph.D., MPH, University of Michigan
Risk assessment; Environmental regulation; Injurious effect of environmental chemicals; Aerosol delivery of chemo-preventive agents; Alternative energy; Environmental education; Metabolism of hepatotoxic aliphatic halogenated hydrocarbons
Shiu-Kai Chin, Professor
Ph.D., Syracuse University, 1986
Formal verification, security, access control Jun Hwan (Brandon) Choi, Assistant Professor
Ph.D. University of California, Los Angeles, 2014
Microwave circuits and systems; Antennas and antenna arrays; Periodic structures; Metamaterials

Lisa B. Cleckner, Research Faculty
Ph.D., University of Michigan, 1995
Environmental health sciences
Samuel P. Clemence, Professor Emeritus, Laura J. and L. Douglas Meredith Professor
Ph.D., Georgia Institute of Technology, 1973
Soil mechanics, geotechnical engineering, foundation engineering
Andria Costello Staniec, Associate Professor, Associate Provost for Academic Programs Ph.D., California Institute of Technology, 1999

Environmental biology
Teresa A. Dahlberg, Dean
Ph.D., North Carolina State University, 1993
Computer Engineering
Thong Dang, Professor
Ph.D., Massachusetts Institute of Technology, 1985
Theoretical/ computational fluid dynamics of internal/external flows
Joan V. Dannenhoffer, Associate Professor M.S., University of Connecticut, 1998; MBA, Rensselaer Polytechnic Institute, 1986
Engineering education pedagogy, engineering mechanics, groundwater remediation
John F. Dannenhoffer, Associate Professor Sc.D., Massachusetts Institute of Technology, 1987
Computational fluid dynamics, modeling and analysis in industry, collaborative education
Barry D. Davidson, Laura J. and L. Douglas Meredith Professor; Professor, Mechanical and Aerospace Engineering; Program Director Aerospace Engineering
Ph.D., Texas A\&M University, 1988
Mechanics of composite materials, fracture mechanics, solid mechanics
Cliff I Davidson, Thomas C. and Colleen L. Wilmot Professor of Civil and Environmental Engineering, Program Director Environmental Engineering Ph.D. California Institute of Technology Engineering sustainability, air quality, water management through green infrastructure
R. Leland Davis, Research Faculty
M.S., University of Michigan

Indoor environmental quality
Kimberley M. Driscoll, Research Faculty
M.S.E.G., Syracuse University, 1991

Environmental systems engineering
Charles T. Driscoll Jr., University Professor
Ph.D., Cornell University, 1979
Aquatic chemistry, biogeochemistry, environmental modeling
Wenliang (Kevin) Du, Professor
Ph.D., Purdue University, 2001
Computer system and network security; data mining (security and privacy issues); security in wireless ad-hoc and sensor networks; security education
Gino Duca, Adjunct Instructor
M.S. Chemical Engineering Syracuse University 2009
Process Design, Thermodynamics
Charles E. Ebbing, Adjunct Professor
M.S.E.E., SUNY, University at Buffalo, 1966

Acoustic consulting, sound quality, community noise, noise criteria, sound measurements, test facilities, creative problem solving

Sara Eftekharnejad
Ph.D. Arizona State University, 2012
Power system operations planning; State estimation; Transmission expansion planning

Gustav A. Engbretson, Professor Emeritus Ph.D. Zoology, University of Oklahoma, 1976
Ehat Ercanli, Associate Professor
Ph.D., Case Western Reserve University, 1997
VLSI, computer-aided design, design automation for digital systems, computer architecture
Makan Fardad, Assistant Professor
Ph.,D., University of California, Santa Barbara, 2006
Structured control of spatially distributed and
large-scale systems, input-output analysis of PDEs with periodic coefficients, parametric resonance in spatio-temporal systems
Bart Farell, Research Associate Professor Ph.D., McGill University, 1977
Affiliate Member, Institute for Sensory Research. Visual psychophysics, visual object recognition
James W. Fawcett, Professor
Ph.D., Syracuse University, 1981
Software, software complexity, re-use, salvage
Eric B. Finkelstein, Research Assistant Professor of Biomedical \& Chemical Engineering \& Lab Manager, Syracuse Biomaterials Institute Ph.D. Anatomy and Cell Biology, SUNY Upstate Medical University, 2002
Vascular cell biology; Biomaterials, Tissue engineering, Cell-material interactions, Bioreplication, Engineered vascular networks
Prasanta Ghosh, Professor; Electrical Engineering Program Director
Ph.D., Pennsylvania State University, 1986 Microelectronics, solid state devices, optoelectronics, thin film processes, power engineering
Jeremy L. Gilbert, Professor
Ph.D. Metallurgical and Materials Science, Carnegie Mellon University 1987
Biomaterials science and engineering; Orthopedic implant materials and devices; Corrosion and biological interactions with metallic biomaterials; Surfaces of biomaterials; Implant retrieval analysis and performance testing; Novel instrumentation and testing development for biomaterials analysis.
Eileen D. Gilligan, Adjunct
Ph.D., Syracuse University, 1983
Environmental geology
Mark N. Glauser, Professor; Associate Dean for Research and Doctoral Programs Ph.D., University at Buffalo, SUNY, 1987 Turbulence, flow control, fluid mechanics of built environments, dynamical systems, unsteady aerodynamics, heat transfer, acoustics, applied mathematics, signal processing and instrumentation

Amrit L. Goel, Emeritus Professor Ph.D., University of Wisconsin, 1968
Software engineering: data mining applications, radial basis function models

Jennifer Graham, Professor of Practice Ph.D. Syracuse University, 2012
Electromagnetic wave behavior in complex media;
Antenna design and characterization; RF and
microwave design; Radar systems engineering
Melissa Green, Assistant Professor
Ph.D. Princeton University, 2009
Experimental Fluid Dynamics
Mustafa Cenk Gursoy, Associate Professor
Ph.D. Princeton University, 2004
Wireless Communications, Information Theory, Communication Networks, and Signal Processing.

Julie M. Hasenwinkel, Associate Professor, Associate Dean for Student Affairs
Ph.D. Biomedical Engineering, Northwestern University 1999.
Biomaterials, nerve regeneration, spinal cord injury
James H. Henderson, Associate Professor, Graduate Bioengineering Program Director Ph.D., Mechanical Engineering, Stanford University, 2004
Biomaterials/Tissue engineering; Mechanobiology; Biomechanics

John C. Heydweiller, Professor Emeritus
Ph.D. Chemical Engineering, Kansas State University 1977

Ian Hosein, Assistant Professor
Ph.D., Materials Science \& Engineering, Cornell University, 2009
Sustainable energy, Materials synthesis and processing, Spontaneousprocess in materials, Device fabrication and measurements

Robert Irwin, Assistant Professor
Ph.D., Syracuse University 2011
Generalized Dynamical Systems, Computability
and Complexity, Quantum Computation
Can Isik, Professor, Senior Associate Dean, College of Engineering and Computer Science Ph.D., University of Florida, 1985
Applications of Neural Nets and Fuzzy
Logic, Intelligent Systems, Controls, Medical
Instrumentation, Environmental Control Systems
Chris E. Johnson, Professor
Ph.D., University of Pennsylvania, 1989
Environmental geochemistry, soil chemistry, statistical modeling
Swiatoslav W. Kaczmar, Adjunct
Ph.D., Michigan State University, 1983
Toxicology and environmental disposition of chemical and physical contaminants
H. Ezzat Khalifa, Professor, Mechanical and Aerospace Engineering; Director, NY STAR Center of Environmental Quality Systems

Ph.D., Brown University, 1976
Thermofluid dynamics of environmental control and energy systems, fluid machinery, valuation of technology

Philipp Kornreich, Emeritus Professor
Ph.D., University of Pennsylvania, 1967
Fiber light amplifiers, lasers, optical fibers, image
propagation through fibers
Donald W. Lake, Adjunct
B.S., SUNY at Buffalo, 1970

Urban stormwater and erosion control
Andrew Chung-Yeung Lee, Assistant Professor
Ph.D., University of Maryland, College Park, 1998
Artificial intelligence, data structures, operating
systems, software engineering, computer theory, computer security

Jay Kyoon Lee, Professor
Ph.D., Massachusetts Institute of Technology, 1985
Electromagnetic fields and waves, microwave remote sensing, antennas and propagation, waves in complex media
Raymond D. Letterman, Professor Emeritus
Ph.D., Northwestern University, 1972
Physical-chemical separation in water and wastewater treatment

Alan J. Levy, Professor
Ph.D., Columbia University, 1982
Theoretical and applied mechanics, applied mathematics

Jacques Lewalle, Associate Professor
Ph.D., Cornell University, 1981
Fluid mechanics, thermodynamics
Yingbin Liang, Associate Professor
Ph.D. University of Illinois at Urbana-Champaign, 2005
Wireless Communications and Networks, Information Theory, Probabilistic Graphical Models, Information Security, Scheduling in Mobile Adhoc Wireless Networks, Resource Allocation for Wireless Networks, Cognitive Radio Wireless Networks

Lowell Lingo Jr, Adjunct
Ph.D. Mechanical Engineering, Syracuse University, 2011
Residential building exergy management, Applied mechanics, Computer-aided design, Mechanical engineering technology education
Eric Mun Lui, Associate Professor, Laura J. and L.
Douglas Meredith Professor
Ph.D., Purdue University, 1985
Computer-aided analysis and design of structures, structural stability, structural dynamics, earthquake engineering

Yan-Yeung Luk, Assistant Professor, Chemistry
Ph.D. University of Chicago 2001
Bio-organic and chemical biology; Nanomaterials; Biosurfaces

Sinead Mac Namara, Assistant Professor Ph.D., Princeton University 2007
Innovation and creativity in structural engineering education; structural art; community engaged design-build; and the structural performance of shell structures

James A. Mandel, Professor Emeritus, Adjunct Professor
Ph.D., Syracuse University, 1967
Composite materials, fiber reinforced concrete, curved bridge design, finite element analysis
Duane L. Marcy, Associate Professor
Ph.D., Rensselaer Polytechnic Institute, 1996
Semiconductor manufacturing, processes, and devices; molecular electronics using the protein bacteriorhodopsin with applications of volumetric and holographic memories and thin films for semiconductor-protein based devices
Shalabh Maroo, Assistant Professor
Ph.D. University of Florida, 2009
Multi-scale transport phenomenon, Thermal Management and Bio-mechanical Systems.
George C. Martin, Professor
Ph.D. Chemical Engineering, University of
Minnesota 1976
Complex fluids, soft condensed matter, rheology
Patrick T. Mather, Milton and Ann Stevenson Professor of Biomedical \& Chemical Engineering \& Director, Syracuse Biomaterials Institute Ph.D. Materials, University of California at Santa Barbara 1994
Polymer science and engineering; Rheology; Shape memory polymers; Polymeric nanocomposites; Mechanical design; Fluid transport and Polymer processing; Drug delivery
Kishan G. Mehrotra, Professor and Chair, Dept. of Electrical Engineering and Computer Science Ph.D., University of Wisconsin, 1971
Multisensor scene analysis, algorithms, neural networks and genetic algorithms; earlier work in statistical inference includes reliability theory, coding theory, time series analysis
Chilukuri K. Mohan, Professor, Interim Dean Ph.D., State University of New York at Stony Brook, 1988
Artificial intelligence, neural networks, evolutionary
algorithms, optimization, pattern recognition, uncertainty

Young Bai Moon, Professor, Mechanical and Aerospace Engineering; Director, Institute for Manufacturing Enterprises
Ph.D., Purdue University, 1988
Manufacturing systems, machine learning, concurrent engineering
Belal Mousa, Adjunct
Ph.D., Syracuse University, 1994
Structural analysis and design, composite
materials, computer analysis
Vadrevu R. Murthy, Professor

Ph.D., Georgia Institute of Technology, 1974 Helicopter dynamics, aeroelasticity and structural dynamics
Shikha Nangia, Assistant Professor
Ph.D. Chemistry, University of Minnesota, 2006
Multiscale computational modeling of nanomaterials and targeted cancer drug delivery
Dawit Negussey, Professor
Ph.D., University of British Columbia, 1985 Geotechnical engineering, experimental soil mechanics, stress strain behavior

Kent Ogden, Adjunct Associate Professor Ph.D., Medical College of Wisconsin, 1999Biomedical Imaging
Jae C. Oh, Associate Professor, Computer Science Program Director
Ph.D., University of Pittsburgh, 2000
Cooperation in multi-agent systems, application of game theory and artificial intelligence techniques to the Internet and distributed computer systems, evolutionary algorithms, game theory, search and optimization algorithms, machine learning algorithms

Susan Older, Associate Professor
Ph.D., Carnegie Mellon University, 1996
Semantics of programming languages, concurrency, fairness, logics of programs, formal methods

Emmet M. Owens Jr., Adjunct Associate Professor M.S.C.E., Colorado State University 1977 Hydraulics, environmental fluid mechanics, water quality modeling
Daniel J. Pease, Emeritus Professor
Ph.D., Syracuse University, 1981
Design and development of shared and distributed parallel systems, software and tools; performance optimization for multi-thread client/ server application in C, C++, Ada, Java, and .NET applications on different parallel architectures, including mobile wireless systems and cyber security on mobile systems

## Vir V. Phoha, Professor

Ph.D. Texas Tech University, 1992
Cyber Security - Cyber offense and defense;
Machine Learning; Smart phones and tablets security; Biometrics - network based and standalone

Peter W. Plumley, Research Associate Professor Ph.D., University of California, Santa Cruz, 1984 Paleomagnetism and Displacement of Tectonic Terranes, Science education, K-12 outreach

Qinru Qiu, Professor, Computer Engineering Program Director
Ph.D. University of Southern California 2001 Dynamic power, thermal and performance management of multiprocessor system-onchip Power and performance optimization of energy harvesting real-time embedded systems Neuromorphic computing and high performance
computing for bioinformatics and cognitive applications

David E. Quinn, Adjunct Instructor
B.S., Rochester Institute of Technology, 2008

Analytical algorithm, Embedded system development, biomedical instrumentation
Dana Radcliffe, Adjunct Professor
Ph.D., Syracuse University, 1996
Ethical issues in engineering and research, Business ethics
Dacheng Ren, Associate Professor, Graduate Chemical Engineering Program Director
Ph.D., Chemical Engineering, University of Connecticut, 2003
Biomaterials/Tissue engineering, Corrosion and electrochemistry, Indoor air quality/environmental engineering, Molecular biotechnology, Sustainable energy production, Systems biology
Philip A. Rice, Professor Emeritus
Ph.D.Chemical Engineering, University of Michigan, 1963

Jorge Luis Romeu, Research Professor Ph.D., Syracuse University, 1990
Statistical modeling, data analysis, simulation modeling, operations research
Utpal Roy, Professor, Program Director, Mechanical Engineering
Ph.D., Purdue University, 1989
Computer-integrated design and manufacturing, development and application of operations research, finite-element methods, geometric modeling, computational geometry, artificial intelligence techniques
James S. Royer, Professor
Ph.D., State University of New York at Buffalo, 1984
Theory of the computational complexity of higher-type functionals, structural computational complexity theory, computational learning theory, biological computing
Ossama "Sam" Salem, Department Chair, A. Yabroudi Chair Professor
Ph.D. University of Alberta, 1998
Construction engineering \& management, sustainable infrastructures and green construction, asset management

Baris Salman, Professor of Practice
Ph.D. University of Cincinnati
Construction Project Management and
Scheduling, Construction Equipment, Sustainable
Infrastructures and Asset Management, Civil
Engineering Material, Principles of Transportation Engineering
Ashok Sangani, Professor
Ph.D., Chemical Engineering, Stanford University, 1982
Complex fluids, soft condensed matter, rheology;
Molecular biotechnology; Multiple phase systems;
Mathematical and numerical analysis

Suresh Santanam, Adjunct, Civil and Environmental Engineering; Associate Professor, Biomedical and Chemical Engineering; Associate Director, Syracuse Center of Excellence in Environmental and Energy Systems
Sc.D., Harvard University, 1989
Air pollution fundamentals, control and design, hazardous wastes management, green engineering, statistical and experimental methods, energy efficiency, sustainable built environments, indoor environmental quality, health effects, human performance and productivity, innovation and entrepreneurship
Tapan K. Sarkar, Professor
Docteur Honoris Causa de l'Universite Blaise Pascal, France; Docteur Honoris Causa, Politechnic University of Madrid, Spain, 2004; Ph.D., Syracuse University, 1975
Analysis and design of electromagnetic radiation from various devices like computers, radio-television towers, and satellite and cable broadcasting system; design of mobile adaptive communication systems including antennas; analysis intelligent signal processing
Fred Schlereth, Research Associate Professor Ph.D. Syracuse University, 1969
Past research interests include: Quadrupole Mass Spectrometer, Fourier Transform Ion Cyclotron Resonance Mass Spectrometer, Quartz Crystal Vacuum Deposition Monitor, Halogen Gas Leak Detector; Analog and Digital Signal Processing and Circuit Design, VLSI Circuit Design; Architecture, Algorithms and Hardware for Parallel Computation; VLSI Cellular Array Computer; Distribution-free Detection Theory, Imaging in Dispersive Media; Neural Networks for Financial Applications. Current research interests include: design of VLSI Signal Processing Circuits for Software Defined Radio.

Klaus Schroder, Professor Emeritus
Ph.D., University of Göttingen, 1954
Walter H. Short, Adjunct, Biomedical and Chemical Engineering Research Professor; Department of Orthopedic Surgery, SUNY Upstate Medical University
M.D., SUNY Upstate Medical University, 1975 Orthopedic biomechanics

Ernest Sibert, Professor Emeritus
Ph.D., Rice University, 1967
Computational logic, logic programming, and parallel computation

Robert L. Smith, Emeritus Professor and Director of the Institute for Sensory Research Ph.D., Syracuse University, 1973

Pranav Soman, Assistant Professor
Ph.D., Pennsylvania State University, 2009
Bioprinting, Biomaterials, Tissue Engineering and
Additive manufacturing (3D printing)
Q. Wang Song, Professor

Ph.D., Pennsylvania State University, 1989

Photonic switching, fiber communications, electrooptics, guided-wave optical devices, optical sensors
Sucheta Soundarajan, Assistant Professor Ph.D. Cornell University, 2013
Detecting and characterizing communities in networks; Understanding how community structure contributes to network evolution; Identifying and characterizing classes of networks; Theoretical and axiomatic approaches to understanding networks; Interesting applications of the above in areas such as computational sustainability
Eric F. Spina, Trustee Professor
Ph.D., Princeton University, 1988
Fluid dynamics, compressible flows, turbulence
Laura J Steinberg, Professor
Ph.D., Duke University, 1993
Environmental Engineering
Alexander Stern, Distinguished Professor Emeritus Ph.D., Ohio State University, 1952 Structure/permeability relationships of 'rubbery' and 'glassy' ploymers; membrane processes for the separation of gases, vapors, and liquids.

Shelley K. Stevens, Adjunct Assistant Professor Ph.D. SUNY Upstate Medical University, 2007

## Tissue Engineering

Radhakrishna Sureshkumar, Distinguished Professor, Biomedical and Chemical Engineering; Chair
Ph.D. Chemical Engineering, University of Delaware 1996
Complex fluids, Soft condensed matter, Rheology, Multiple phase systems, Nanotechnology, Sustainable energy production, Systems biology/ metabolic engineering, Mathematical and numerical analysis
Jian Tang, Associate Professor
Ph.D. Arizona State University, 2006 Assistant Professor, Electrical Engineering and Computer
Science; Ph.D. Arizona State University, 2006;
Wireless Networking and Mobile Computing,
Green Computing and Networking, Cloud Computing, Data Centers, Algorithm Design and Analysis.

Lawrence L. Tavlarides, Professor
Ph.D., Chemical Engineering, University of Pittsburgh, 1968
Indoor air quality/environmental engineering;
Multiple phase systems; Sustainable energy production, Nuclear engineering

William C. Tetley, Part-Time Instructor
Chi Tien, Distinguished Professor Emeritus Ph.D., Northwestern University, 1958

Svetoslava Todorova
Ph.D., Syracuse University, Professor of Practice
Environmental Engineering, Environmental Chemistry, Sustainable Engineering, Water and Wastewater Treatment

Pramod K. Varshney, Distinguished Professor; Research Director, NY State Center for Advanced Technology in Computer Applications and Software Engineering (CASE)
Ph.D., University of Illinois, 1976
Communications, signal and image processing, multisensor data/information fusion, remote sensing, wireless communications, detection theory
Thomas D. Vedder, Instructor Emeritus, Mechanical and Aerospace Engineering;
B.S., Syracuse University, 1970

Mechanical laboratory experimentation, microprocessor machine control design

Naveen Velagapudi, Adjunct
M.E., PSG Technology Institute, India, 1984

Quality management, project management, manufacturing automation
Senem Velipasalar, Assistant Professor
Ph.D. Princeton University, 2007
Computer Vision, Video/Image Processing,
Battery-Powered Embedded Smart Camera
Systems, Distributed Multi-Camera Systems, Pattern Recognition, Statistical Learning, Signal
Processing and Information Theory.
Hong Wang, Professor
Ph.D., University of Minnesota, 1985
Signal processing, communication engineering, radar/sonar systems
Yanzhi Wang, Assistant Professor
Ph.D. University of Southern California, 2014
Control and Optimization of Energy Generation
and Energy Storage Systems; Green and
Sustainable Computing; Low-Power Circuits/
Systems and Power Management; Extremely Low-
Power Near-Threshold Computing and Emerging
Technologies
David S. Wazenkewitz, Adjunct
B.S., Syracuse University

Environmental engineering and solid waste management
Volker Weiss, Professor Emeritus, Mechanical and
Aerospace Engineering, Physics;
Ph.D., Syracuse University, 1957
Mechanical behavior of solids, materials science
and engineering; computer applications
Heng Yin, Assistant Professor
Ph.D. The College of William and Mary, 2009
System Security, Malware Analysis and Detection
Using Binary Analysis Technique; Network Security
Edmund Yu, Associate Professor
Angela Zachman, Assistant Professor, Undergraduate Bioengineering Program Director Ph.D., Vanderbilt University, 2014
Engineering therapeutic scaffolds for peripheral artery disease: Emphasis on proangiogenic and anti-inflammatory regulation.

Reza Zafarani, Assistant Professor

Ph.D. Arizona State University, 2014
Big data, mainly in the order of billions, analyzing human behavior at scale using social media, and mining large-scale social media sites

## Jianshun S. Zhang, Professor

Ph.D., University of Illinois, Urbana-Champaign, 1991
Building environmental and mechanical systems, materials emissions and indoor air quality, room air and contaminant distributions, multizone air and air contaminant transports in buildings, building energy efficiency, integrated computer simulation tools for building environmental and mechanical system design, system analysis and optimization
Josef J. Zwislocki, Distinguished Professor Emeritus Sc.D. Federal Institute of Technology, Zurich 1948

# David B. Falk College of Sport and Human Dynamics 

Diane Lyden Murphy, Dean
440 White Hall
falk.syr.edu/

## About the College

Welcome to the David B. Falk College of Sport and Human Dynamics. The Falk College brings together Syracuse University's professional programs in Child and Family Studies, Food Studies, Marriage and Family Therapy, Nutrition Science and Dietetics, Public Health, Sport Management and Social Work in an environment of crossdisciplinary teaching, research, practice and service. Through classroom learning and handson experience, our students learn by exampleand by doing-to become professionals who will provide services that enhance the emotional and physical well-being of individuals, families, and communities.

The Falk College leadership team includes:
Irene Kehres, Associate Dean, Student Services Eileen Lantier, Senior Associate Dean, Academic Affairs
Deborah J. Monahan, Associate Dean, Research
The Dean's Office of the Falk College can be reached at 315-443-2027 for more information about academic programs, services and all other activities related to the College.

## Mission and Goals

The Falk College is committed to improving the health and well-being of individuals of all ages, their families, and their communities through scholarship, practice, civic engagement, advocacy, and entrepreneurial leadership within the framework of principles of social justice. The Falk College brings together a rich history of academic programs whose signatures of social responsibility and justice join new and evolving majors reflective of educating global citizens whose leadership changes the places and people where they live and work.

## Accreditation

The Falk College offers accredited programs in Nutrition Science and Dietetics at the undergraduate level and Nutrition Science at the graduate level accredited by the Academy of Nutrition and Dietetics' Accreditation Council for Education in Nutrition and Dietetics. The MA and Ph.D. programs in Marriage and Family Therapy are accredited by the Commission on Accreditation for Marriage and Family Therapy

Education (COAMFTE) and all Social Work programs are fully accredited through the Council on Social Work Education (CSWE).

## Undergraduate Program Overview

Diane Lyden Murphy, Dean 315-443-2027

The David B. Falk College of Sport and Human Dynamics is Syracuse University's most serviceoriented college; cross-professional collaboration is the cornerstone of teaching, research, and practice. Like professionals in the field, students and faculty in the college work and learn together across disciplinary lines to find new, more effective approaches to important social issues. Through the bachelor's degree programs in child and family studies, food studies, public health, nutrition science and dietetics, social work, and sport management, students prepare to become professionals who will enhance the emotional and physical wellbeing of individuals, families, and communities.

Faculty members are current and former practitioners who provide a real-world perspective on the professional field. The small college atmosphere allows for personalized attention from the faculty and staff who guide students through the educational experience. In consultation with faculty and staff advisors, students choose a major program of study and select coursework that provides necessary professional preparation enhanced by a solid liberal arts education.

The integration of theory and practice lies at the heart of the college's mission. Through the college's extensive internship program, students gain valuable hands-on experience that complements their classroom learning and better prepares them for their careers.

## General Regulations

For academic rules and regulations that apply to all University students, see the Academic Rules section of this catalog. This section also contains special regulations that apply to all students matriculated in the College.

## Combined, Dual, and Double Programs

Approval for combined, dual, and double programs of study must be obtained from each academic unit involved.

## PED General Electives

Up to 4 credits in physical education (PED) courses numbered 100-299 may be included among the general elective credits counted
toward a degree in the college for singly enrolled students.

## Fees

Laboratory fees are required in certain courses, where specialized equipment and materials are provided.

## Intra-University Transfer

Qualifying GPA varies, depending on the major. Departments may have additional criteria. Applicants are required to discuss tentative transfer plans with the academic chair or director of the proposed program of study. Students who meet department criteria will be admitted on a space-available basis. Transfer requests may be held until the end of the semester.

## Part-Time Study

Students unable to enroll for full-time study may complete the bachelor's degree on a part-time basis through University College (UC). Part-time students register through UC and are advised both by UC advisors and by faculty in the College.

## Study Abroad

The College, in cooperation with the Syracuse University Abroad (SU Abroad), strongly encourages students to take advantage of the opportunity to study abroad. Study abroad options include semester, summer, and short-stay programs.

SU Abroad offers students the opportunity to participate in a program of study abroad in Santiago, Chile; London, England; Madrid, Spain; Strasbourg, France; Florence, Italy; Hong Kong, China; or Beijing, China. Syracuse University also builds strong overseas affiliations and partnerships, allowing students to be placed directly at other centers and universities.
No prior knowledge of a foreign language is required, with the exception of the Chile program, and students may choose from a variety of courses to fulfill requirements or elective credits for their program of study in the College. It is essential that students begin planning early for study abroad and work closely with their academic advisors.
For further information, contact the Office of Student Services in the David B. Falk College of Sport and Human Dynamics 300 MacNaughton Hall, 315-443-3144, or Syracuse University Abroad, 106 Walnut Place, 315-443-3471.

## Minors

Students in the College are strongly encouraged to complete a minor, and should seek assistance from their academic advisors in choosing a
minor that will enhance their academic programs and add breadth and depth to their college experience. With careful and early planning, most minors can fit into the undergraduate curriculum without a need of extra coursework. Descriptions and requirements for minors in the College can be found in the list of programs below.

## Child and Family Studies

Robert P. Moreno, Chair, 315-443-1715 144 White Hall

## Faculty

Colleen Baish Cameron, D. Bruce Carter, Joseph P. Fanelli, Irene Kehres, Ambika Krishnakumar, Eunjoo Jung, Teresa MacDonald, Robert P. Moreno, Matthew Mulvaney, Kamala Ramadoss, Rachel Razza, Jaipaul L. Roopnarine

## Undergraduate

Eunjoo Jung, Undergraduate Program Director, 315-443-5778
The Department of Child and Family Studies (CFS) is involved in the scientific investigation of children and families. Students engage in multidisciplinary learning about the challenges facing families and children across social, cultural, and contextual settings. In addition, students study the factors that promote strengths and resiliency to foster healthy families and children. CFS students not only learn in the classroom, they receive firsthand experience in the community as well. For example, CFS seniors are involved in a 180-hour community practicum that allows them to apply the knowledge gained in the classroom to real life settings. As a result, CFS students have a comprehensive understanding of children and families in theory and in practice.

Students in the 124 credit B.S. degree program pursue interests in one of four tracks of specialization: (a) Early Child Development, (b) Youth and Family Development, (c) Early Childhood Education (4+1), (d) Child Life Specialist. Core courses focus on child and youth development (i.e., infancy, play, interpersonal competence, human sexuality) and family development (i.e., parenting, marriage, and domestic violence). CFS also offers minors in Child and Family Studies, Child and Family Policy and Mindfulness and Contemplative Studies.

CFS graduates pursue careers working with children and families in a variety of areas including early education and intervention programs, social service and mental health agencies, the juvenile justice system, youth
programs, schools and parent and family services. Many students also pursue post baccalaureate degrees in fields such as social work, psychology, medicine, family law, counseling, health care, and education as well as child and family studies.

## Facilities

The Bernice M. Wright Child Development Laboratory School provides opportunities for research, teacher training, and community service. Founded as a model of the parent cooperative movement in early childhood education, the school includes parent involvement at the center of its mission. The school is staffed by both graduate and undergraduate students and offers a strong inclusive component that embraces the developmental and cultural perspectives of its children and families. Limited enrollment is open to both the University and local communities.

The Jack Reilly Institute for Early Childhood and Provider Education was established through a generous gift from Syracuse University alumnus John D. Reilly III '69, G'70 and his wife, Patricia M. Reilly. Adopting a multidisciplinary approach, the Institute's mission is to conduct basic and applied research and to provide training to early childhood professionals on culturally and developmentallyappropriate early childhood education practices and issues pertaining to childhood safety.

## Major

## Child and Family Studies, BS

Eunjoo Jung, Undergraduate Program Director, 315-443-5778

The 124 credit B.S. degree program in child and family studies provides students with a broad foundation covering a range of issues focusing on the healthy development of children and families. In addition to liberal arts courses, students are expected to complete 15 credits of Program Requirements and $18-24$ credits in a specialty track (decided on in the second semester of the sophomore year). Each track prepares students to work in specific settings:

Early Child Development students focus on child care and pre-school settings in the early intervention field.

Youth and Family Development students learn to work in a variety of settings that focus on youth and family needs including social services, health, mental health and juvenile justice programs, counseling centers, parenting programs, recreation and athletic programs, afterschool programs and schools.
Early Childhood Education (4+1) prepares students for careers as early childhood educators. Students have the opportunity to
pursue a master's degree in early childhood special education (ECSE) on year after completing an undergraduate degree in CFS. Students enrolled in this degree program will receive a 30 percent reduction for their one year of graduate tuition.

Child Life Specialist prepares students to help children and their families overcome life's most challenging events. Providing emotional support for families, Child Life Specialists encourage optimum development children facing a broad range of challenges particularly those related to healthcare and hospitalization. Additional requirements must be met to become Certified as a Child Life Specialist as designated by the Child Life Council. Please visit http://www. childlife.org/Certification/Getting\ Certified/ index.cfm for information concerning additional requirements to become certified as a Child Life Specialist.
Students seeking to transfer into CFS should contact the Director of Undergraduate Studies.

## College Requirements (1 credit)

HSH 101 - First-Year Gateway

## Communication Skills

WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
CFS 255 - Interpersonal Competence or
CRS 331 - Interpersonal Communication

## Quantitative Skills

Statistics and/or Calculus ( $6-8$ credits)

## Natural Science and Mathematics

NSD 225 - Nutrition in Health
Additional natural science and mathematics (912 credits)

## Social Sciences

PSY 205 - Foundations of Human Behavior
SOC 248 - Ethnic Inequalities and Intergroup Relations or

SWK 328 - Human Diversity in Social Contexts
Additional Social Sciences (6 credits)

## Humanities

PHI 191 - Ethics and Contemporary Issues
Additional humanities (9 credits)

# Program Requirements (15 credits) 

CFS 201 - Family Development
CFS 202 - Development of Children and Youth
CFS 204 - Applied Research Methods in Child and Family Studies

CFS 363 - Intro to Gerontology
CFS 367 - Child and Family in Cross-Cultural Perspectives or
CFS 371 - Latino Families and Children in the United States

## Specialized Tracks

In the second semester of the sophomore year, students must choose one of the following specialized tracks:

## Early Child Development (18 credits)

## Required Courses

CFS 331 - Play, Childhood Development and Early Education
CFS 335 - Issues and Perspectives in Early Childhood Education

CFS 432 - Foundations and Principles of Early Childhood Education

CFS 433 - Child Practicum
Plus 2 other CFS courses at the 300 level or above
(500 level courses may be taken as electives)

## Youth and Family Development (18 credits)

## Required Courses

CFS 493 - Youth and Family Practicum
CFS 494 - Youth and Family Practicum II
Choose 2 courses from the list below:
CFS 388 - Human Sexuality
CFS 448 - Contemp Amer Famly\&Commn
CFS 479 - Power, Conflict, Violence, and the Family
Plus 2 other CFS courses at the 300 level or above
(500 level courses may be taken as electives)
Child Life Specialist (24 credits)
Required Courses

CFS 325 - Children and Families in Health Care Settings

CFS 331 - Play, Childhood Development and Early Education

CFS 423 - Death, Dying \& Loss: Child and Family Perspectives
CFS 432 - Foundations and Principles of Early Childhood Education

CFS 433 - Child Practicum
Plus 3 other CFS courses from the list below

CFS 345 - The Developing Infant
CFS 365 - Language Development in Children \& Families

CFS 395 - Seminar: Family and Child Intervention
CFS 447 - Principles and Practices in Parenting

## Electives to Reach 124 Degree Applicable Credits

## Early Childhood Education Master's Degree 4+1

Students who wish to be certified as early childhood educators have the opportunity to pursue a master's degree in early childhood special education (ECSE) in a reduced period of time (one academic year and two summers). After completing the child and family studies degree, qualified students may apply for graduate study in the School of Education at Syracuse University. Students enrolled in this degree program will receive a 30 percent reduction in their graduate tuition. Students desiring to pursue this option should complete the child development specialization, including CFS 367, and complete these specific liberal arts requirements beyond those listed for the major:
a one-year sequence (two courses) of collegelevel mathematics (may also fulfill the math/ foreign language requirement in the liberal arts core);
two sciences with laboratories (physical sciences recommended);
at least one class in history (which may count toward fulfilling liberal arts core requirements in the social sciences or humanities, depending on the course); and
an art history course (e.g. an FIA course that would also meet a humanities requirement).

The Early Childhood Special Education (ECSE) graduate program requires that undergraduate writing, mathematics, and laboratory sciences courses have grades averaging no less than a B- with no grade below a C. Students are required
to demonstrate competency in a foreign language either by successfully completing the first year of college study in a language (e.g. SPA 101 at Syracuse University) or by providing official documentation of successful completion of Level III of foreign language in high school. Interested undergraduate students should contact the School of Education about taking EDU 303 to further reduce the number of graduate credits required for the degree.

Interested students should work closely with their academic advisors to meet these requirements.

## Inclusive Early Childhood Special Education, BS

## Inclusive Early Childhood Special Education

## Contact:

Mara Sapon-Shevin, 176 Huntington Hall, 315-443-2685, saponsh@syr.edu

This B.S. degree program is a dual program between the School of Education and the David B. Falk College of Sport and Human Dynamics with the School of Education as the home school. This program provides you with the professional background and a solid core of liberal arts distribution and concentration coursework. A cornerstone of the program is the extensive and varied series of field experiences it offers, coordinating coursework with fieldwork in the schools as early as the first year of study. Many schools and childcare centers in the Syracuse area are at the forefront of inclusive education. Through our close partnerships with local schools and early childhood centers that welcome all students, and with our wide network of urban, suburban, and rural school affiliations, we provide a broad range of opportunities for getting the most out of field experiences.

## Program Requirements

Program requirements include liberal arts skills, a concentration in social/behavioral science with emphasis on child and family studies, and professional coursework. This intense program typically requires a minimum of 135 credits. The length varies and can be more than 138 credits, depending on the student's mathematics and foreign language background, and other choices made by the student. In most cases, students enroll for more than 15 credits in a semester and/or take summer courses (at SU or other colleges) to complete the degree within four years. Therefore, prospective students not already enrolled in the School of Education are encouraged to consult with the School of Education as early as possible.

Note: Because of the professional education sequence, the study abroad semester for students completing in four years must be spring of the junior year.

## Liberal Arts Requirements:

WRT 105 - Studio 1: Practices of Academic Writing or
WRT 109 - Studio 1: Practices of Academic Writing (Honors)

WRT 205 - Studio 2: Critical Research and Writing or

WRT 209 - Studio 2: Critical Research and Writing (Honors)

Algebra competency or
MAT 112 - Algebraic Operations and Functions
MAT 117 - Foundational Mathematics via Problem Solving I

MAT 118 - Foundational Mathematics via Problem Solving II
SCI 104 - Science-Questions and Quests: Physical Phenomena I

SCI 105 - Science-Questions and Quests: Physical Phenomena II
U.S. History (3 credits)

History II (diversity within the U.S. or Global History) (3 credits)

Geography (3 credits)
Citizenship, Economics, and Government (3 credits)

Global Perspectives (3 credits)
Literature (6 credits)

## Foreign Language:

One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or passing level three of high school study

Other liberal arts breadth (3 credits)
Choose one course from the program's list of approved fine arts, philosophy, religion, mathematics or scientific perspectives courses.

## Child and Family Studies/Social Science Concentration:

CFS 201 - Family Development
CFS 202 - Development of Children and Youth
CFS 331 - Play, Childhood Development and Early Education

CFS 345 - The Developing Infant

CFS 395 - Seminar: Family and Child Intervention
CFS 367 - Child and Family in Cross-Cultural Perspectives or

CFS 371 - Latino Families and Children in the United States

CFS 447 - Principles and Practices in Parenting or
CFS 479 - Power, Conflict, Violence, and the Family or
CFS 487 - Critical Incidents in Family Development

## Social sciences:

Three social science courses used to meet distribution requirements above. At least one must be 300 level ( 9 credits)

## Professional Education Requirements:

EDU 203 - Introduction to Inclusive Schooling
EDU 201 - Practicum in Pre-K Inclusive Education
SPE 311 - Perspectives on Disabilities
IDE 201 - Integrating Technology into Instruction I
CFS 432 - Foundations and Principles of Early Childhood Education

CFS 335 - Issues and Perspectives in Early Childhood Education

CSD 303 - Communication in the Classroom
EDU 366 - Safe and Healthy Learning Environments or equivalent, which includes the following topics: Identifying/reporting child abuse, violence prevention, child abduction prevention, highway/general safety, alcohol/ drug/tobacco prevention, fire and arson prevention, and training related to the Dignity for All Students (DASA) Act.

Arts in Education (Complete two courses from the following list (2 credits total)

EDU 431 - Art in the Classroom
EDU 432 - Music in the Classroom
EDU 433 - Speech and Drama in the Classroom

## Assessment

Both this program and the teaching profession are demanding, requiring not only appropriate attitudes about children, and skills in working with them, but also knowledge of the content to be taught, excellent writing skills, critical thinking skills, and much more. Students' progress is reviewed several times through the program against specific proficiencies and other assessment criteria. Effective for those entering the program Fall 2014 or later, to be eligible for Block I, students must have a 3.0 cumulative

GPA a 3.0 average for and no grade below a B - in EDU 203, EDU 201, SPE 311, and CFS 432 (if taken before Block I); a B- or better grade in each writing course taken; and a B - or better average with no grade below a $C$ in both the two required mathematics courses and the two required natural science courses, with at least one B- grade in each before entering Block I. In addition, they must have satisfactory ratings on the proficiencies and dispositions that are part of the professional courses and field experiences. Reviews also take place to determine eligibility to enter subsequent professional blocks, and additional information about this is available from the program faculty teaching in the blocks.

## Block I

EED 314 - Teaching Strategies for Inclusive Education

EED 325 - Primary Grade Literacy Methods and Curriculum

EED 361 - Block I Field Experience and Seminar

## Block II

EED 323 - Primary Grade Mathematics Methods and Curriculum

EED 328 - Block II Field Experience
EED 362 - Block II Field Seminar
SPE 324 - Differentiation for Inclusive Education
EDU 434 - Creative Movement for the Classroom
IDE 301 - Integrating Technology into Instruction II

## Early Childhood Block III

EED 400 - Selected Topics Early Childhood Integrated Methods I (3 credits)
EED 400 - Selected Topics Early Childhood Integrated Methods II (3 credits)

EED 400 - Selected Topics Early Childhood Block III Field Experience (3 credits)

IDE 401 - Integrating Technology into Instruction III

## Student Teaching

All students must complete EDU 366 - Safe and Healthy Learning Environments before the student teaching semester.

EED 464 - Student Teaching Seminar/Inclusive Education
EDU 508 - Student Teaching Inclusive Early Childhood Special Education (12 credits)

SPE 434 - Collaborative Teaching for Inclusive Education

## Minor

## Child and Family Policy Minor

The Child and Family Policy Studies minor is an interdisciplinary minor that gives students an opportunity to study public policy and child and family issues. Students apply their understanding of healthy development to public policies and government programming. This minor requires a completion of 18 credits. To be admitted to the program, students must submit a Declaration of Minor form to their academic advisor, the undergraduate program director and their home college dean's office.

## Required core courses (12 credits)

PAF 101 - An Introduction to the Analysis of Public Policy
CFS 201 - Family Development or
CFS 202 - Development of Children and Youth
MAX 201 - Quantitative Methods for the Social Sciences

CFS 433 - Child Practicum or
CFS 493 - Youth and Family Practicum or
PAF 410 - Practicum in Public Policy

## Plus one elective course to be chosen from the following (3 credits)

CFS 335 - Issues and Perspectives in Early Childhood Education (Prereq: CFS 202)

CFS 395 - Seminar: Family and Child Intervention
CFS 479 - Power, Conflict, Violence, and the Family

Plus one elective course to be chosen from the following (3 credits)
PAF 410 - Practicum in Public Policy Topic: NonProfit \& Gov Agency Pract.
Topic: Education Policy
Topic: Grant Writing
Topic: Intro to Web Design
Topic: Data Management of Public Pol
Topic: Housing
PAF 431 - Criminal Justice System
SWK 314 - Social Welfare Policy and Services I

## Child and Family Studies Minor

Students pursuing programs in other areas of study may choose a minor in child and
family studies. The minor program requires the completion of 18 credits. To be admitted to the program students must submit a declaration of minor form to the department.

## Required core courses

CFS 201 - Family Development
CFS 202 - Development of Children and Youth
CFS 363 - Intro to Gerontology
CFS 367 - Child and Family in Cross-Cultural Perspectives or
CFS 371 - Latino Families and Children in the United States

## Non-Practicum CFS Courses

Plus two non-practicum CFS courses at the 300or 400-level or above

## Mindfulness and Contemplative Studies Minor

## Description:

Mindfulness and contemplative practice are experiential modes of learning and self-inquiry. Contemplative practices are widely varied and include various forms of meditation, focused thought, writing, creative/performing arts, and yoga. Mindfulness and contemplative practices can foster greater empathy and communication skills, improve focus and attention, reduce stress, and enhance creativity and general wellbeing. Given these advantages, these skills are of growing interest to researchers and practitioners from diverse fields. The purpose of this minor is to provide students with a fundamental understanding of mindfulness and contemplative study and practice, and opportunities to cultivate these skills in their courses and apply them in their communities. There is a particular emphasis on the role of mindfulness in children and youth, as these practices contribute to an individual's growth across multiple developmental domains. This minor would be of interest to students in the Child Life Specialist track in Child and Family Studies, as well as to those in other social sciences, health sciences and education.

## Admission:

The minor in Mindfulness and Contemplative Studies is available to all University students with a Cum GPA of 2.0 or above on a space-available basis. To be admitted to the program, students must submit a Declaration of Minor form to their academic advisor, the undergraduate program director Child and Family Studies and their home college dean's office.

## Curriculum Requirements

The minor in Mindfulness and Contemplative Studies requires the completion of six courses (18 credits), three of which are mandatory and three of which are electives. The three mandatory courses include ( 9 credits):
CFS 202 - Development of Children and Youth
CFS 452 - Mindfulness in Children and Youth
HTW 405 - Cognitive Behavioral Approaches to Stress Reduction

Students must select three of the following courses as electives for the minor ( 9 credits):
AAS 338 - Creative Writing Workshop
CFS 358 - Prosocial \& Moral Dvipmnt
CRS 347-Mindful Communication Skills
HTW 301 - Holistic Healing Practices
NSD 417 - Food as Medicine

## Total Credits Required: 18

( 9 credits come from three required courses and 9 come from three elective courses).

## Notes:

Note that students who are CFS majors can take CFS 358, but this course will count toward their CFS degree requirements not this minor. Thus, CFS students will have to choose non-CFS courses for their electives.

## Public Health, Food Studies and Nutrition

## Department of Public

 Health, Food Studies and NutritionRick Welsh, Department Chair, 315-443-4060 304 Lyman Hall
The Department of Public Health, Food Studies and Nutrition offers undergraduate academic programs in: Food Studies, BS; Nutrition, BS; Nutrition Science, BS; and Public Health, BS;
Students' academic programs move outside of the classroom to gain hands-on experiences in their major. The faculty and students in the department are experiencing ever-increasing opportunities for interdisciplinary research and experiential learning locally, nationally and globally in the areas of public and community health, nutrition, and food studies, as well as other fields related to these specialties.

# Undergraduate Programs Food Studies 

Rick Welsh, Department Chair and Undergraduate Program Director, 443-4060
304 Lyman Hall

## Faculty

Tim Barr, Anne Bellows, Mary Ann P. Kiernan, Laura-Anne Minkoff-Zern, Rick Welsh, Evan Weissman
The 120 credit bachelor of science in food studies-helps students develop analytical skills and knowledge about links between food system structure, dietary choices and health outcomes.
Courses cover topics like food as medicine in disease prevention and treatment, women's rights to adequate food and nutrition, and global rules for governing trade and distribution of food and agricultural products, among many others. Hands-on field learning is often linked to faculty affiliations with organizations of professional significance, such as the USDA, UN and USAID. Students encounter many diverse opportunities, such as:

Experiential learning requirements that include a strong network of community-based partnerships and regional, national and international opportunities.

Global gastronomy studies, including specialized study abroad programming in Florence.

Hands-on learning in culinary labs working with professional chefs and experts in nutrition, food policy and public health.

One-on-one interactions with faculty experts in rights-based approaches to food and nutrition, scale-appropriate technologies to support rural development, emerging food social movements, nutrition focused on pediatrics, and community education.
Increased emphasis on healthy lifestyles, disease prevention, public interest in food policy, growing and aging populations, and diet-related disease epidemics continue to spur demand for our graduates.

## Intra-University Transfers

The Food Studies, BS accepts transfers into the program on a rolling admissions' basis.
Transfer applicants must schedule an interview with Dr. Rick Welsh, Food Studies Undergraduate Program Director, to review admission requirements.
Applicants outside of the David B. Falk College of Sport and Human Dynamics who are making satisfactory progress and have a cumulative grade
point average of 2.3 or above will be admitted into the Food Studies program.

Applicants inside the David B. Falk College of Sport and Human Dynamics who are making satisfactory progress and have a cumulative grade point average of 2.0 or above will be admitted into the Food Studies program.

## Food Studies Minor

The 18-19 credit minor in Food Studies is an interdisciplinary approach to examine the U.S. and global food systems from production through consumption using a multi-level and holistic approach. Students take courses covering production, consumption and policy aspects of food as well as food security. The Food Studies minor is a valuable complement to a variety of majors because of the growing interest in food systems in academia and in the general public. Issues around organic production, the local food movement, genetic modification of food and nanotechnology, and food access in the U.S. and elsewhere are all covered in the minor and have potential applications in the natural sciences, business, public policy, communications and media, and the social sciences.

## Nutrition Science and Dietetics

Tanya Horacek, Undergraduate Program Director, 315-443-2386
440 Sims Hall
Dietetic Program Director Nancy Rindfuss, 315-443-2386

Dietetic Internship Director Debra Z. Connolly, 315-443-2386

## Faculty

Lynn S. Brann, Kay S. Bruening, L. Beth Dixon, Tanya M. Horacek, Sudha Raj, Sarah H. Short, Jane B. Uzcategui, Margaret Voss, Jennifer Wilkins

The Nutrition Science and Dietetics program offers two major programs: Nutrition/Dietetics, BS and Nutrition Science, BS. Students may select one major program or choose a double-major with another program in the David B. Falk College of Sport and Human Dynamics or in another school or college. Students also have the opportunity to pursue a minor.
Dietetics is the application of the knowledge of human nutrition to support the nutritional needs of the healthy as well as the sick. The study of human nutrition encompasses biology, physiology, chemistry, and the behavioral and social sciences. Students study the changes in nutritional needs throughout the life cycle, examine the factors that influence the selection of foods, and explore ways
in which diet can be modified.
Additional courses in chemistry and the biological sciences are prerequisites for many human nutrition courses, which cover basic and advanced nutrition, medical nutrition therapy, practice of dietetics, community nutrition, food science, and food service systems.
All students who complete degree requirements will be eligible for the Nutrition, BS. Additional requirements must be met to receive a dietetics verification statement. Dietetic verification statement requirements are posted on the departmental website in the program handbook.

Nutrition Science emphasizes the biological and physical sciences. In addition to food science, nutrition in health, medical nutrition therapy, and advanced nutrition, studies include work in general and organic chemistry, biology, physiology, and biochemistry. In nutrition science, students prepare to pursue post-graduate work in medicine, dentistry, education, or health care or work for major food or pharmaceutical companies.

## Nutrition Minor

Students pursuing programs in other areas of study may choose a minor in nutrition. The minor requires completion of 18 credits. To be admitted to the program, students must:
Maintain an overall GPA of 3.0
Complete NSD 225
Meet with the minor coordinator to complete the declaration of minor form

## Nutrition Science Minor

Students pursuing programs in other areas of study may choose a minor in nutrition science. The minor program requires the completion of 19 credits. To be admitted to the program, students must meet with the minor coordinator and file a declaration of minor form with their home college.

## Public Health

Maureen Thompson, Undergraduate Program Director, 315-443-9815
344 White Hall

## Faculty

Dessa Bergen-Cico, James Byrne, Luvenia W. Cowart, Brooks Gump, Sandra D. Lane, Eileen Lantier, David Larsen, Katherine McDonald, Mary Ann Middlemiss, Lutchmie Narine, Lisa OlsonGugerty, Maureen Thompson,

The Public Health program offers a 123-credit hour Public Health, BS Our graduates are prepared to work in community health education and health promotion in public health agencies,
as well as in newly emerging preventive health services in corporate wellness centers, college health services, insurance agencies, or pharmaceutical companies. Many also plan for graduate education in public health, healthrelated social sciences (medical anthropology, medical sociology, or health psychology), law, and the health professions (medicine, nursing, physician assistance, pharmacy, or dentistry).
The public health program includes a 46 credit liberal arts core, a 45 credit public health core, and a 32 credit elective requirement. The public health core includes key public health concepts such as environmental health, epidemiology, health systems administration, and social \& behavioral determinants of health as well as those specific to community health education, a subfield within public health. The generous number of electives facilitates the completion of minor(s) or a second major. In addition, the flexibility of the program enables students to study abroad.
Students frequently move outside the classroom to gain hands-on experience in initiatives to improve the health of individuals, families, and communities. Each student completes a 9-credit internship and capstone project during their senior year.

## Intra-University Transfers

The Public Health, BS accepts transfers into the program on a rolling admissions' basis who meet the following criteria:

Students with a cumulative GPA 2.7 or higher, in good academic standing at the university and with interest in public health are considered for transfer to the major.

Students with cumulative GPAs of 2.5-2.69 will be considered based on factors influencing the GPA and grades of $B$ or better earned in public health courses previously completed. Students must have completed a minimum of 12 credit hours at Syracuse University.

In order to complete the public health degree requirements within a 4 year plan of study, students must have a minimum of 4 remaining semesters of study.

An appointment must be made with the Undergraduate Program Director to discuss the major and to outline a plan for degree completion.

To make an appointment, contact Dr. Thompson, the undergraduate program director via email: mlthomps@syr.edu

## Addiction Studies Minor

The 19-21 credit minor in Addiction Studies prepares students for employment in addiction prevention programs and services. Upon
completion of the minor, students will have met the New York State Office of Alcoholism and Substance Abuse Services (OASAS) education training requirements for Credentialed Prevention Specialist (CPS) and Credentialed Prevention Professional (CPP). Supervised work experience (2,000 hours for CPS; 4,000 hours for CPP) and a passing score on the International Certification and Reciprocity Consortium (ICRC) exam is required before full certification is awarded by OASAS. The minor in Addiction Studies is open to all Syracuse University students with a GPA of 2.5 or above, including those within the public health major.

## Health and Wellness Minor

The 18 credit Minor in Health and Wellness is available to all University students with a Cum GPA of 2.5 or above and addresses personal behaviors, environmental factors and social conditions that affect the quality of personal and public health. It is intended to increase the capacity of the individual to adopt healthbenefiting behaviors and lifestyles.

Please note: students who pursue a minor in health and wellness may not pursue a minor in public health or a minor in addiction studies. Public health majors may not pursue a Health and Wellness minor.

## Public Health Minor

The Minor in Public Health is available to all University students with a Cumulative GPA of 2.5 or above and provides students with opportunities to develop broad competencies in areas of study commonly identified with public health. The minor is designed in part for students wishing to gain knowledge and skills for employment in a number of fields that intersect with public health or in preparation for graduate study in public health.

Please note: students who pursue a minor in public health may not pursue a minor in health and wellness. Public health majors may not pursue a public health minor.

## Major

## Food Studies, BS

Rick Welsh, Undergraduate Program Director, 4434060
304 Lyman Hall

## Faculty:

Tim Barr, Anne Bellows, Mary Kiernan, Laura-Anne Minkoff-Zern, Evan Weissman, Rick Welsh

## Description:

The Food Studies program takes a multi-level and holistic approach to food, from production through consumption. Beyond a core, the curriculum offers two concentrations: 1) Food Politics and Governance; and, 2) Community Food Systems and Gastronomy. The major provides excellent preparation for further graduate studies in social science and legal and policy approaches to food. Also, students with this major might seek employment with government agencies at all levels dealing with food and agriculture issues; food oriented non-governmental organizations that work on sustainability and food security issues; as well as work with food processing, preparation and distribution firms.

## Intra-University Transfers

The Food Studies, BS accepts transfers into the program on a rolling admissions' basis.

Transfer applicants must schedule an interview with Dr. Rick Welsh, Food Studies Undergraduate Program Director, to review admission requirements.

Applicants outside of the David B. Falk College of Sport and Human Dynamics who are making satisfactory progress and have a cumulative grade point average of 2.3 or above will be admitted into the Food Studies program.
Applicants inside the David B. Falk College of Sport and Human Dynamics who are making satisfactory progress and have a cumulative grade point average of 2.0 or above will be admitted into the Food Studies program.

## Requirements

The 120 credit major includes five (5) areas of study: Falk College requirements, a liberal arts core, a food studies core, a food studies area of concentration, and electives. The major concludes with a senior level culminating experience. For this requirement, students choose to complete a research project (FST 485) or a practicum experience (FST 486). A minimum of 60 credits of liberal arts coursework is required. The liberal arts core courses, liberal arts elective courses, and writing intensive course are selected from the Syracuse University Liberal Arts Core Guidebook. The liberal arts core is left open purposefully, to allow students to sample broadly from the Arts \& Science offerings. Such a liberal approach is appropriate for Food Studies since it has emerged as a multidisciplinary field.

The credit distribution and requirements are outlined as follows:

Falk College Requirement: 13
credits

HSH 101 - First-Year Gateway
Four additional courses, selected from any department within the Falk College (12)

Liberal Arts Core: $45-48$ credits
Writing Requirement (6 credits)
WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
Quantitative Skills: 3-4 credits
MAT 121 - Probability and Statistics for the Liberal Arts I or
MAT 221 - Elementary Probability and Statistics I
Natural Sciences: 12-15 credits To include,
NSD 225 - Nutrition in Health
Social Sciences: 12 credits
Humanities: 12 credits
Food Studies Core: 21 credits
FST 102 - Food Fights: Contemporary Food Issues
NSD 115 - Food Science I
FST 202 - Agroecology
FST 204 - Food, Identity, and Power
FST 403 - The Human Right to Adequate Food and Nutrition

NSD 457 - Research and Evaluation in Nutrition FST 485 - Research Experience in Food Studies or
FST 486 - Food Studies Practicum

## Food Studies Concentrations:

(14-16 credits), students choose 1 concentration
Community Food Systems \& Gastronomy (Any 5 courses)
NSD 114 - Food Safety and Quality Assurance
NSD 275 - Food Service Systems
FST 304 - Farm to Fork
FST 309 - Philosophy \& Practice of Locavorism
FST 402 - Feeding the City: Urban Food Systems
NSD 452 - Mediterranean Food and Culture: A Florence Experience
NSD 455 - Community Nutrition
Food Politics \& Governance (Any 5 courses)

FST 303 - Food Movements
FST 306 - Food Cooperatives
FST 307 - Feeding the World: Global Agri-Food Governance

FST 402 - Feeding the City: Urban Food Systems
FST 423 - Food in History
NSD 555 - Food, Culture and Environment

## Electives:

To meet 120 degree requirement, 22-27 credits. To include sufficient credits of liberal arts coursework to $=60$ credits LA total

Total Credits: 120

## Degree Awarded

Bachelor of Science in Food Studies|

## Nutrition Science, BS

## Contact

Tanya Horacek, 315-443-2386
The B.S. degree program in nutrition science emphasizes the biological and physical sciences. In addition to food science, nutrition in health, medical nutrition therapy, and advanced nutrition, studies include work in general and organic chemistry, biology, physiology, and biochemistry.

## Lower-Division Requirements

HSH 101 - First-Year Gateway
WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
CHE 106 - General Chemistry Lecture I
CHE 107 - General Chemistry Laboratory I
CHE 116 - General Chemistry Lecture II
CHE 117 - General Chemistry Laboratory II
CHE 275-Organic Chemistry I
CHE 276 - Organic Chemistry I Laboratory
CHE 325 - Organic Chemistry II
CHE 326 - Organic Chemistry II Laboratory
BIO 121 - General Biology I
BIO 123 - General Biology II
BIO 124 - General Biology II Laboratory
PSY 205 - Foundations of Human Behavior
NSD 225 - Nutrition in Health
BIO 216 - Anatomy \& Physiology I
BIO 217 - Anatomy and Physiology II

## Upper-Division Requirements

NSD 481 - Medical Nutrition Therapy I
NSD 466 - Advanced Nutrition
NSD 456 - Nutritional Biochemistry
or
BCM 475 - Biochemistry I and
BCM 476 - Biochemistry II

## Social or behavioral sciences 6 credits

## Humanities 6 credits OR Foreign Language 8 credits

Note: all 8 credits of foreign language must be in one language

## Nutrition electives 20 credits

Electives to complete 124 degree applicable credits

## Degree Requirements

Degree requires a 3 credit Writing Intensive course and 3 credits of Critical Reflections.
The Writing Intensive and critical reflections courses may meet a Humanities, Social Science, or elective requirement. Note that some courses may satisfy both the writing intensive and critical reflections requirement -For a listing of writing intensive and critical reflection courses, please consult the Liberal Arts Core Guidebook.

## Additional Information

In addition to above requirements, pre-med students are required to complete additional courses in physics and mathematics according to the recommendations of the Health Professions Advisory Program.

## Nutrition, BS

## Contact

Tanya Horacek, 315-443-2386
The B.S. degree program in nutrition includes coursework in chemistry, biology, meal management, nutrition in health, physiology, and biochemistry. Students also study nutrition in the life span, medical nutrition therapy, community nutrition, nutrition education and counseling, and advanced nutrition. Opportunities for fieldwork provide students with hands-on experience.
All students who complete degree requirements will be eligible for the B.S. in Nutrition. Additional
requirements must be met to receive a dietetics verification statement. Dietetic verification statement requirements are posted on the departmental website in the program handbook.
The nutrition program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) (120 S. Riverside Plaza, Suite 2000, Chicago, IL 60606; 312-879-0040; ext. 5400). Graduates of this program must then complete an accredited Dietetic Internship to gain eligibility for the registration exam. To obtain an internship, a student must usually have a minimum GPA of 3.4 and related work experience.

## Required Courses

## Communication Skills (9 credits)

WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
CRS 225 - Public Advocacy or
CRS 325 - Presentational Speaking

## Quantitative Skills (3-4 Credits)

MAT 121 - Probability and Statistics for the Liberal Arts I or

MAT 221 - Elementary Probability and Statistics I

## Natural Science (24 Credits)

BIO 121 - General Biology I
BIO 123 - General Biology II
BIO 124 - General Biology II Laboratory
BIO 216 - Anatomy \& Physiology I
BIO 217 - Anatomy and Physiology II
CHE 106 - General Chemistry Lecture I
CHE 107 - General Chemistry Laboratory I
CHE 116 - General Chemistry Lecture II
CHE 117 - General Chemistry Laboratory II

## Social Science (9 Credits)

6 additional credits of social science courses-see Liberal Arts Core Book

PSY 205 - Foundations of Human Behavior

## Humanities 6 credits OR Foreign Language 8 credits

Note: all 8 credits of foreign language must be in one language

## Program Requirements (58

## Credits)

HSH 101 - First-Year Gateway
NSD 114 - Food Safety and Quality Assurance
NSD 115 - Food Science I
NSD 216 - Restaurant and Food Service Operations
NSD 275 - Food Service Systems
NSD 312 - Cost Control in Food Services
NSD 314 - Hospitality Human Resources Management

NSD 326 - Practice of Dietetics
NSD 342 - Nutrition in the Life Span
NSD 455 - Community Nutrition
NSD 456 - Nutritional Biochemistry
NSD 457 - Research and Evaluation in Nutrition
NSD 466 - Advanced Nutrition
NSD 476 - Nutrition Seminar
NSD 477 - Senior Nutrition Seminar II
NSD 481 - Medical Nutrition Therapy I
NSD 482 - Medical Nutrition Therapy I Lab
NSD 483 - Medical Nutrition Therapy II
NSD 484 - Medical Nutrition Therapy II Lab
NSD 511 - Nutrition Education
NSD 512 - Nutrition Counseling
NSD 555 - Food, Culture and Environment or
NSD 452 - Mediterranean Food and Culture: A Florence Experience

## Electives to complete 124 degree applicable credits

## Degree Requirements

Degree requires a 3 credit Writing Intensive course and 3 credits of Critical Reflections.

The Writing Intensive and critical reflections courses may meet a Humanities, Social Science, or elective requirement. Note that some courses may satisfy both the writing intensive and critical reflections requirement -For a listing of writing intensive and critical reflection courses, please consult the Liberal Arts Core Guidebook.

## Public Health, BS

Maureen Thompson, Undergraduate Program Director,
315-443-9815, 344 White Hall
The 123 credit bachelor of science degree in Public Health (BSPH) prepares students for health related careers in government, private and nonprofit organizations that address health promotion
and illness prevention in individuals, families and communities. Students gain knowledge and skills in traditional public health core areas including environmental health, epidemiology, health services administration, and social \& behavioral determinants of health. In addition, the program includes coursework to prepare students to work within the field of community health education. The program culminates with a 400 hour senior internship and capstone experience.

Graduates of the program will be competent to pursue entry level employment in public health fields or to pursue graduate studies in a variety of academic areas including public health, public policy, health care administration, and law. The program can also provide students with a pathway to advanced studies in medicine, dentistry, physician assistant studies or nursing.

## Intra-University Transfers

The Public Health, BS accepts transfers into the program on a rolling admissions' basis who meet the following criteria:

Students with a cumulative GPA 2.7 or higher, in good academic standing at the university and with interest in public health are considered for transfer to the major.
Students with cumulative GPAs of 2.5-2.69 will be considered based on factors influencing the GPA and grades of $B$ or better earned in public health courses previously completed.
Students must have completed a minimum of 12 credit hours at Syracuse University.
In order to complete the public health degree requirements within a 4 year plan of study, students must have a minimum of 4 remaining semesters of study.
An appointment must be made with the Undergraduate Program Director to discuss the major and to outline a plan for degree completion.
To make an appointment, contact Dr. Thompson, the undergraduate program director via email: mlthomps@syr.edu

## Required Courses

## Communication Skills (9 credits)

WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing
One course focused on either oral or interpersonal communication competency.

Students choose from:
CFS 255 - Interpersonal Competence
CRS 225 - Public Advocacy
CRS 325 - Presentational Speaking
CRS 331 - Interpersonal Communication
CRS 333-Small Group Communication
CRS 335 - Leadership/Stewardship Communication

CRS 430 - Intercultural Communication
SWK 201 - Social Work Practice Skills Laboratory I

## Quantitative Skills (6-8 credits)

Students must complete 2 semesters of quantitative skills coursework. Students complete a FIRST Course and a different SECOND Course as outlined below:

## First Course:

MAT 121 - Probability and Statistics for the Liberal Arts I

MAT 221 - Elementary Probability and Statistics I
STT 101 - Introduction to Statistics
Second Course (subject to pre-reqs):
GEO 386 - Quantitative Geographic Analysis
MAT 122 - Probability and Statistics for the Liberal Arts II
MAT 222 - Elementary Probability and Statistics II
MAT 285 - Life Sciences Calculus I
MAT 295 - Calculus I
PSY 252 - Statistical Methods II
MAX 201 - Quantitative Methods for the Social Sciences

## Natural Science (9-11 credits)

## Required:

NSD 225 - Nutrition in Health
Choose 6-8 additional credits from the following:

ANT 131 - Introduction to Biological Anthropology
BIO 115 - Ecological Problems and Society
BIO 121 - General Biology I
BIO 123 - General Biology II
BIO 124 - General Biology II Laboratory
BIO 211 - Introduction to Neuroscience
BIO 216 - Anatomy \& Physiology I
BIO 217 - Anatomy and Physiology II
EAR 106 - Geohazards \& Natural Disasters

EAR 110 - Dynamic Earth
EAR 111 - Climate Change Past and Present
EAR 117-Oceanography
EAR 205 - Water and Our Environment
EAR 210 - History of Earth and Life
GEO 155 - The Natural Environment
GEO 215 - Global Environmental Change
GEO 326 - The Geography of Climate and Weather
PSY 223 - Introduction to Cognitive Neuroscience
PSY 323 - Brain and Behavior
Social Science (9 credits)
PSY 205 - Foundations of Human Behavior
6 additional credits of social science courses-see Liberal Arts Core Book

## Humanities (9 credits)

See Liberal Arts Core Book

## College Requirement (1 credit)

HSH 101 - First-Year Gateway
Program Requirements (45 credits)
HTW 121 - Personal and Social Health
HTW 221 - Community Health Promotion
HTW 302 - Influencing Healthy Behavior
HTW 303-Community and Environmental Health
HTW 304 - Community Health Education
HTW 306 - Public Health Administrative Systems
HTW 307 - Culturally Competent Health Care
HTW 309 - Health Disparities and Underserved Populations
HTW 311 - Health Literacy
HTW 401 - Epidemiology
HTW 402 - Implementing and Evaluating Health Programs

HTW 403 - Community-Based Health Policy and Research

HTW 422 - Senior Capstone Internship

## General Electives to reach 123 degree applicable credits

15 credits of which must be from the liberal arts core book.

## Note:

Students must complete an approved Global Diversity course (3 credits-see Public Health
website for list of approved courses) and an approved Health Ethics course ( 3 credits). These courses may be a humanities, a social science or a general elective.

## Minor

## Addiction Studies Minor

## Contact

Maureen Thompson, 315-443-9815, mlthomps@ syr.edu

The 19-21 credit minor in Addiction Studies prepares students for employment in addiction prevention programs and services. Upon completion of the minor, students will have met the New York State Office of Alcoholism and Substance Abuse Services (OASAS) education training requirements for Credentialed Prevention Specialist (CPS) and Credentialed Prevention Professional (CPP). Supervised work experience (2,000 hours for CPS; 4,000 hours for CPP) and a passing score on the International Certification and Reciprocity Consortium (ICRC) exam is required before full certification is awarded by OASAS. The minor in Addiction Studies is open to all Syracuse University students with a GPA of 2.5 or above, including those within the public health major.

## Addiction Studies Minor Requirements (19-21 Credits)

## Required Courses

HTW 318 - Alcohol, Other Drugs, Sex and Gambling: Dynamics of Addiction

HTW 436 - Ethics in Addiction Services
Choose 1 of the following
HTW 408 - Addictions in Cultural Context
HTW 412 - Global Perspectives in Alcohol \& Other Drug Policies

Choose 1 of the following options:
HTW 321 - Prevention in Addiction Services
HTW 304 - Community Health Education and
HTW 402 - Implementing and Evaluating Health Programs

## Elective Courses (choose 2)

HTW 405 - Cognitive Behavioral Approaches to Stress Reduction

HTW 406 - Clinical Evaluation and Assessment of Addictions

HTW 407 - Motivational Interviewing for

Behavioral Change
HTW 409 - The Impact of Addictions on Families and Relationships

## Food Studies Minor

## Coordinator:

Evan Weissman, Food Studies minor coordinator, 443-4295
304 Lyman Hall

## Description:

The Food Studies minor is an interdisciplinary approach to examine the U.S. and global food systems from production through consumption using a multi-level and holistic approach.
Students take courses covering production, consumption and policy aspects of food as well as food security. The Food Studies minor is a valuable complement to a variety of majors because of the growing interest in food systems in academia and in the general public. Issues around organic production, the local food movement, genetic modification of food and nanotechnology, and food access in the U.S. and elsewhere are all covered in the minor and have potential applications in the natural sciences, business, public policy, communications and media, and the social sciences.

## Admission:

To be admitted to the program, students must submit a Declaration of Minor form to their academic advisor, the minor coordinator and their home college dean's office.

## Curriculum Requirements

The program leading to a minor in Food Studies requires the completion of six courses (18-19 credits), two of which are mandatory and four of which are electives. Students should work closely with their major advisor and the Food Studies minor coordinator to ensure they are meeting the necessary requirements for both programs.

Minors must take the following TWO Iower-division courses:

FST 102 - Food Fights: Contemporary Food Issues

Minors must take FOUR of the following courses:
FST 303 - Food Movements
FST 304 - Farm to Fork
FST 306 - Food Cooperatives

FST 307 - Feeding the World: Global Agri-Food Governance

FST 309 - Philosophy \& Practice of Locavorism
FST 402 - Feeding the City: Urban Food Systems
FST 403 - The Human Right to Adequate Food and Nutrition

FST 421 - Morality of a Meal:Food Ethics
FST 423 - Food in History
NSD 452 - Mediterranean Food and Culture: A Florence Experience
NSD 555 - Food, Culture and Environment

## Health and Wellness Minor

The 18 credit Minor in Health and Wellness is available to all University students with a Cum GPA of 2.5 or above and addresses personal behaviors, environmental factors and social conditions that affect the quality of personal and public health. It is intended to increase the capacity of the individual to adopt healthbenefiting behaviors and lifestyles.

The minor requires completion of 18 credits, including 12 credits above the 300 level. To be admitted into the minor, a student must submit a Declaration of Minor form to his or her faculty advisor, the Health and Wellness Minor coordinator, and the Dean's office in his or her home college.
For more information, or to obtain a form to declare the Minor in Health and Wellness, contact the minor coordinator, Dr. Maureen Thompson (mlthomps@syr.edu).
Please note: students who pursue a minor in health and wellness may not pursue a minor in public health or a minor in addiction studies. Public health majors may not pursue a Health and Wellness minor.

## Required Core Courses

HTW 121 - Personal and Social Health
HTW 221 - Community Health Promotion

## Additional Courses

Plus four additional courses chosen from HTW courses number 300 or above.

## Nutrition Minor

Minor Coordinator
Tanya M. Horacek, 315-443-2386
Students pursuing programs in other areas of study may choose a minor in nutrition. The minor program requires the completion of 18 credits. To
be admitted to the program, students must:
Maintain an overall GPA of 3.0
Complete NSD 225
Meet with the minor coordinator to complete the declaration of minor form

## Required

NSD 115 - Food Science I
NSD 225 - Nutrition in Health

## Choice of 12 credits

NSD 326 - Practice of Dietetics
NSD 342 - Nutrition in the Life Span
NSD 343 - Dietary Supplements
NSD 417 - Food as Medicine
NSD 425 - Nutrition for Fitness and Sports
NSD 427 - Public Health Nutrition
NSD 447 - Weight Management, Obesity and Disordered Eating

NSD 452 - Mediterranean Food and Culture: A Florence Experience

NSD 455 - Community Nutrition
NSD 511 - Nutrition Education
NSD 555 - Food, Culture and Environment

## If prerequisites are taken

NSD 456 - Nutritional Biochemistry
NSD 466 - Advanced Nutrition
Note:
Admission to the minor and classes will be on a space-available basis.

## Nutrition Science Minor

## Minor Coordinator

Margaret Voss, 315-443-2386
Students pursuing programs in other areas of study may choose a minor in nutrition science. The minor program requires the completion of 19 credits. To be admitted to the program, students must meet with the minor coordinator and file a declaration of minor form with their home college.

## Required

NSD 225 - Nutrition in Health
NSD 456 - Nutritional Biochemistry
NSD 466 - Advanced Nutrition

## Choice of 9 credits

NSD 342 - Nutrition in the Life Span
NSD 343 - Dietary Supplements
NSD 425 - Nutrition for Fitness and Sports
NSD 447 - Weight Management, Obesity and Disordered Eating
NSD 455 - Community Nutrition
NSD 481 - Medical Nutrition Therapy I
NSD 483 - Medical Nutrition Therapy II
NSD 555 - Food, Culture and Environment

## Public Health Minor

The Minor in Public Health is available to all University students with a Cumulative GPA of 2.5 or above and provides students with opportunities to develop broad competencies in areas of study commonly identified with public health. The minor is designed in part for students wishing to gain knowledge and skills for employment in a number of fields that intersect with public health or in preparation for graduate study in public health. The minor requires completion of 18 credits, including 12 credits above the 300 level. To be admitted into the minor, a student must submit a Declaration of Minor form to his or her faculty advisor, the Public Health Minor coordinator, and the Dean's office in his or her home college.

For more information, or to obtain a form to declare the Minor in Public Health, contact the minor coordinator, Dr. Maureen Thompson (mlthomps@syr.edu).

Please note: students who pursue a minor in public health may not pursue a minor in health and wellness. Public health majors may not pursue a public health minor.

## Course Requirements for the Minor in Public Health

## Required Courses:

HTW 221 - Community Health Promotion
HTW 303 - Community and Environmental Health
HTW 306 - Public Health Administrative Systems
HTW 309 - Health Disparities and Underserved Populations

Students choose 2 additional courses from the following:

HTW 305 - Community Mental Health Promotion
HTW 307 - Culturally Competent Health Care
HTW 311 - Health Literacy
HTW 401 - Epidemiology

HTW 415 - Public Health Ethics
HTW 403-Community-Based Health Policy and Research

HTW 463 - Global Health
HTW 437 - LGBTQ Health and Well Being
HTW 462 - Culture and Reproductive Health and Medicine

NSD 342 - Nutrition in the Life Span
NSD 455 - Community Nutrition

## School of Social Work

Carrie Jefferson Smith, Director, 315-443-5562 244 White Hall

Bette Brown Thoreck, Undergraduate Program Director, 315-443-9723
244 White Hall

## Faculty

Keith A. Alford, Maria Brown, Kendra DeLoach, Paul Caldwell, Kenneth N. Corvo, Ellen deLara, Alejandro Garcia, Pamela Johnson, Eric Kingson, Karen E. Kirkhart, Tracey Musarra Marchese, Deborah J. Monahan, Nancy R. Mudrick, Merril Silverstein, Carrie Jefferson Smith, Yvonne Smith, Matthew Spitzmueller, Bette Brown Thoreck
Director of Field Instruction Deborah Ducett, 315-443-5586, Sims Hall

## Social Work, BS

The undergraduate professional social work program offers a bachelor of science degree. The goals of this program, in order of priority, are as follows:
To prepare undergraduate students for competent and effective generalist professional practice by developing the requisite social work knowledge, values, and skills, and
To prepare undergraduate students for continuing professional education and/or graduate education.

The social work program is based on the concept of ecological systems, which maintains that the fundamental focus of social work practice is on the transactions of people and their environments, and on the constant state of reciprocity in which each shapes the other. Social work intervention aims to promote the progressive forces and minimize the regressive forces in those transactions. The curriculum incorporates instruction in five professional foundation areas: social welfare policy and services, human behavior in the social environment, research, social work practice, and field practicum. Instruction in these areas builds upon a carefully chosen and strong liberal arts preparation in the
humanities, the social and behavioral sciences, and the natural sciences taken within the College of Arts and Sciences.
The program is accredited by the Council on Social Work Education.

## Social Welfare Minor

Students pursuing minors in other areas of study may choose a social welfare minor. The minor program requires the completion of 18 credits. To declare a minor, students must have a minimum cumulative GPA of 2.5 and submit a Declaration of Minor form to the social welfare minor program or the director of the baccalaureate social work program, their faculty advisors, and the dean's office of their home colleges. A limit of 3 transfer credits may be applied with permission.

## Gerontology Interdisciplinary Minor

The interdisciplinary minor in gerontology provides an opportunity for students to focus academic work on the older population. It requires the completion of 18 credits, 12 of them above the 300 level. To be admitted to the program, students submit a Declaration of Minor form to their faculty advisor, the gerontology minor coordinator, and their home college dean's office.

## Major

## Social Work, BS

## Contact

Bette Brown Thoreck, Baccalaureate Program Director, 315-443-9723

The bachelor of science degree in social work requires the completion of 120 credits. Social work major requirements total 42 credits. Liberal arts and supporting requirements total 55 to 58 credits including 12 to 15 credits in liberal skills, 12 credits in humanities, 24 credits in social sciences, 7 credits in natural sciences, and 20 to 23 credits of electives.

## College Requirement (1 credit)

HSH 101 - First-Year Gateway

## Major Requirements (42 credits)

SWK 201 - Social Work Practice Skills Laboratory I SWK 202 - Social Work Practice Skills Laboratory II

SWK 301 - Foundations of Social Work Practice
SWK 314 - Social Welfare Policy and Services I

SWK 315 - Social Welfare Policy and Services II
SWK 326 - Persons in Social Context
SWK 328 - Human Diversity in Social Contexts
SWK 361 - Foundations of Social Work Research
SWK 401 - Strategies of Social Work Intervention I
SWK 402 - Strategies of Social Work Intervention II

SWK 435 - Field Practicum I
SWK 436 - Field Seminar I
SWK 445 - Field Practicum II
SWK 446 - Field Seminar II

## Liberal Skills Requirements (1214 credits)

Expository writing 6-9
Mathematics 6-8
Note:
The statistics requirement for social work students may be satisfied by taking MAT 121/MAT 122 or MAT 221/MAT 222/PSY 252 as a liberal skills requirement.

## Humanities Divisional Perspectives (12 credits)

Social work students must complete 12 credits in the humanities divisional perspective defined in the liberal arts core of the College of Arts and Sciences. More detail is offered in the publication, "Liberal Arts Core."

Natural Sciences Divisional Perspective ( 7 credits)

## Required

BIO 121 - General Biology I

## Choose one of the following:

ANT 131 - Introduction to Biological Anthropology
BIO 123 - General Biology II
PSY 223 - Introduction to Cognitive Neuroscience
PSY 315 - Drugs and Human Behavior
PSY 395 - Abnormal Psychology
NSD 225 - Nutrition in Health

## Social Sciences Divisional Perspective (24 credits)

AAS 112 - Introduction to African American Studies in Social Sciences or

ANT 121 - Peoples and Cultures of the World

ECN 203 - Economic Ideas and Issues or
ECN 258 - Poverty and Discrimination in America
PSC 121 - American National Government and Politics or

PSC 122 - American State and Local Government and Politics
PSY 205 - Foundations of Human Behavior
PSY 274 - Social Psychology
PSY 335 - Psychology of Childhood or
PSY 336 - Psychology of the Adolescent or
CFS 202 - Development of Children and Youth
PSY 337 - Psychology of Adult Life: Maturity and Old Age or
SWK 357 - Processes of Aging or
CFS 363 - Intro to Gerontology
SOC 101 - Introduction to Sociology or
SOC 102-Social Problems

## Electives to reach 120 degree applicable credits

Specific advising guidelines for selecting and sequencing required and elective courses are available from the School of Social Work.

## Minor

## Gerontology Interdisciplinary Minor

The interdisciplinary minor in gerontology provides an opportunity for students to focus academic work on the older population. It requires the completion of 18 credits, 12 of them above the 300 level. To be admitted to the program, students submit a Declaration of Minor form to their faculty advisor, the Undergraduate Program Director for Social Work, and their home college dean's office.

## Required core courses (3 credits)

CFS 363 - Intro to Gerontology or
SWK 357 - Processes of Aging
Plus one of the following core courses (3 credits)
SOC 364 - Aging and Society
WGS 364 - Aging and Society
PSY 337 - Psychology of Adult Life: Maturity and Old Age

## Additional Courses (6 credits)

Choice of two additional courses from the following list of aging course electives (at least 6 credits)
NSD 342 - Nutrition in the Life Span
ECN 410 - Topics in Economic Applications
HTW 221 - Community Health Promotion
PPE 514 - Exercise and Aging
PSY 437 - Cognition and Aging
REL 551 - Ethics and the Health professions or
PHI 550 - Selected Topics in Philosophy
SOC 355 - Sociology-of Health and IIIness
SOC 421 - Population Issues

## Additional Courses (6 credits)

Choice of two additional courses from the following age-related course electives (at least 6 credits)

ANT 363 - Anthropology of Family Life
CFS 201 - Family Development
CFS 487 - Critical Incidents in Family Development
HTW 307 - Culturally Competent Health Care
HTW 309 - Health Disparities and Underserved Populations

HTW 311 - Health Literacy
HTW 403 - Community-Based Health Policy and Research

NSD 225 - Nutrition in Health
PSY 382 - Health Psychology
SOC 281 - Sociology of Families

## Note:

Students who wish to substitute other courses with comparable gerontological content as alternatives for the required courses may do so by submitting a petition to the coordinator of the gerontology minor, Bette Brown Thoreck. Also, students may petition to substitute experience credit in the student's program of study, e.g. CFS 470. To ensure adequate gerontological content, the experience credit petition must be reviewed by the coordinator of the gerontology minor.

## Social Welfare Minor

Students pursuing majors in other areas of study may choose a social welfare minor. The minor program requires the completion of 18 credits. To declare a minor, students must have a minimum cumulative GPA of 2.5 and submit a Declaration of Minor form to the social welfare minor program or the director of the baccalaureate social work

## UNDERGRADUATE COURSE CATALOG

program, their faculty advisors, and the dean's office of their home colleges. A limit of 3 transfer credits may be applied with permission.

Required core courses (3 or 6 credits; 3 credits each)
SWK 115 - Introduction to Social Work
SWK 201 - Social Work Practice Skills Laboratory I

## Additional Information

(If both SWK 115 and SWK 201 are taken, SWK 115 must precede SWK 201.)

## Elective courses (12-15 credits; 3 credits each)

SWK 314 - Social Welfare Policy and Services I
SWK 315 - Social Welfare Policy and Services II
SWK 326 - Persons in Social Context
SWK 328 - Human Diversity in Social Contexts
SWK 357 - Processes of Aging
SWK 361 - Foundations of Social Work Research
SWK 400 - Selected Topics
SWK 437 - LGBTQ Health and Well Being
SWK 458 - Practice and Policy in Adult Corrections

## Sport Management

Michael D. Veley, Director and Chair, 315-4432630
402 MacNaughton Hall
Gina Pauline, Undergraduate Program Director, 315-443-2630
402 MacNaughton Hall

## Faculty

Rick Burton, Dennis Deninger, Mary Graham, Chad McEvoy, Rodney Paul, Gina Pauline, Jeff Pauline, Patrick T. Ryan, Michael D. Veley, Patrick T. Walsh, John Wolohan

Internship Coordinators: Jenna La MannaJohnson, Jaime Grillo

## Undergraduate

Gina Pauline, Director Undergraduate Program, 315-443-2630

The academically rigorous Sport Management curriculum combines department-specific courses with professional electives and liberal arts requirements, providing students with the tools to pursue a career in sport management or graduate study. Coursework covers such areas as business,
marketing, management, communications, societal influences and impacts, event planning, and law. The 124 -credit program allows students to pursue specializations or minors and tailor their studies according to their professional interests. The required 12 -credit capstone provides students with valuable industry experience.

## Sport Management Intra-University Transfer Information

In order to complete an intra-university transfer in to the Department of Sport Management, a student must meet the following criteria:
a minimum overall GPA of 3.5 ;
complete the SPM degree requirements within a four-year plan of study, students must have a minimum of five remaining semesters of study;
complete a minimum of 24 credit hours at Syracuse University;
have completed SPM 205, or be enrolled in the course when applying;
complete and submit an SPM intra-university transfer application
submit a current resume
submit a two-to-three page type-written essay explaining:
their academic interest in sport management;
desired career track (i.e. marketing, legal studies, communications, business management, etc);
prior sport industry experience;
sport-related volunteer and/or community service work;
internship experience
A personal interview with the SPM transfer committee may be arranged by the department after the IUT application deadline. Students who meet the criteria listed above will only be accepted into the Sport Management program on a space available basis, based on current program enrollment.
Deadlines for applying for an Intra-University Transfer are November 1st for spring admission and March 1st for fall admission.

The application is available on the SPM website.

## Major

Sport Management, BS
Gina Pauline, Undergraduate Program Director,

315-443-2630
The 124-credit hour B.S. in Sport Management incorporates studies in arts and sciences with professional electives and liberal arts requirements, providing students with the tools to pursue careers and graduate study in sport.

Department specific coursework includes marketing, management, communications, finance, and law. The degree allows students to pursue a concentration or minor to tailor their studies according to their professional interests.

## Program Requirements

Communication Skills (12 credits)
WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
WRT 307 - Advanced Writing Studio: Professional Writing
CRS 325 - Presentational Speaking
Quantitative Skills (11 credits)
MAT 183 - Elements of Modern Mathematics
MAT 221 - Elementary Probability and Statistics I
MAT 284 - Business Calculus
Natural Science (7 credits)
Natural Science (must include a lab) (4 credits)
Natural Science elective (3 credits)

## Humanities Division (9 credits)

Social Science Division (12 credits)

ECN 203 - Economic Ideas and Issues
ECN 300 Level or Higher (3 credits)
Social Science elective ( 6 credits)

## Additional Liberal Arts Courses (9 credits)

General Skills (4 credits)
HSH 101 - First-Year Gateway
ACC 201 - Essentials of Accounting
Program Requirements (43 credits)

SPM 201 - Professional Development in Sport Management

SPM 205 - Principles and Contemporary Issues in Sport Management

## UNDERGRADUATE COURSE CATALOG

SPM 215 - Principles of Sales in Sport
SPM 225 - Managing the Sport Organization
SPM 295 - Research Methodology
SPM 315 - Sport Finance
SPM 325 - Sport Communications
SPM 345 - Technology in Sport Management
SPM 395 - Psycho-Social Issues of Sport
SPM 415 - Sport Law
SPM 444 - Sports Marketing Management
SPM 455 - Senior Sport Management Capstone

## Sport Management Degree Requirements

Students must also complete one of the following as part of the Sport Management degree requirements: Program Electives ( 15 credits) or Minor (15-18 credits) or Area of Specialization (15-18 credits)

## Electives:

*To reach 124 degree applicable credits

## Total Credits: 124

Note:
*Students must take enough credits in electives to complete the 124 credits required for graduation. These electives may be taken in any school or college within the University. No more than four credits may be in physical education and no more than six experience credits accepted towards degree.

## Minor

Sport Management Minor Jeff Pauline, Minor Coordinator, 315-443-2630
The 18 -credit minor in Sport Management is designed for students who are interested in pursuing a career path in the sport industry along with their chosen major. Students selecting this minor in sport management should have an interest in learning about the business, communications, marketing, event planning, economic, global, and legal aspects of the sport industry.

Criteria and Important Deadlines

Applicants are admitted on a space-available basis. To be eligible, students must have: a cumulative GPA of 3.25 or above;
completed a minimum of 30 credits at Syracuse University in courses graded A-F;
submit a minor application;
declare a minor no later than the first semester of junior year.
Deadlines for applying for the minor are November 1 for spring admission and April 1 for fall admission.

## Required core course (3 credits)

SPM 205 - Principles and Contemporary Issues in Sport Management

## Additional Sport Management Courses

Plus 15 credits of additional Sport Management courses, 12 credits of which must be numbered 300 or above.

## Child and Family Studies

CFS 201 - Family Development

## Child and Family Studies

3 credit(s) Every semester
Theoretical and functional approach to marital and family life with a developmental perspective. Issues related to marital and parental careers.

CFS 202 - Development of Children and Youth

Child and Family Studies
3 credit(s) Every semester
Principles and patterns of child and youth development. Influence of biological and experiential factors. Extra-familial and intrafamilial relationships as they influence child and youth development. Fieldwork or equivalent required.

CFS 204 - Applied Research Methods in Child and Family Studies

## Child and Family Studies

3 credit(s) At least 1 x fall or spring Critical evaluation of research studies, development of basic skills for conducting research and application of research knowledge and skills in practical settings.
PREREQ: CFS 201 AND CFS 202 AND (MAT 121 OR MAT 221)
COREQ: MAT 122 OR MAT 222 OR MAX 201 OR
PSY 252 OR SWK 361
CFS 255 - Interpersonal Competence

## Child and Family Studies

3 credit(s) At least $1 x$ fall or spring Interpersonal problem-solving skills. Helping theories appropriate to human development
settings. Skills and behaviors that apply theory to practice setting.

## CFS 270 - Experience Credit

## Child and Family Studies

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## CFS 290 - Independent Study

## Child and Family Studies

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CFS 300 - Selected Topics

## Child and Family Studies

## 1-6 credit(s)

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## CFS 325 - Children and Families in

 Health Care Settings
## Child and Family Studies

3 credit(s) At least 1x fall or spring Basic child life theory and practice focused on improving healthcare experiences for children and families by providing play, preparation and education programs in pediatric settings.
PREREQ: CFS 202

## CFS 326 - Developmental Perspectives in Medical Language

## Child and Family Studies

3 credit(s) At least 1x fall or spring Understanding of developmentally supportive approaches to healthcare communication within the context of illness, injury and hospitalization. Introduction to medical terms related to body systems/disorders, with emphasis on developmentally appropriate medical language and communication in pediatrics.

## CFS 327 - Human Development and Sport

## Child and Family Studies

3 credit(s) At least 1x fall or spring Examines the dynamics of social change and human well-being in the context of sport in promoting positive youth development. Personal, social, and cultural development through sport-
based programs and initiatives are explored.

## CFS 331 - Play, Childhood Development and Early Education

Child and Family Studies
3 credit(s) At least 1 x fall or spring Importance of play for children's overall development; the roles of parents and teachers in supporting children's play from infancy through early school age; enriching classroom play; diversity and special needs considerations.
PREREQ: CFS 202

## CFS 335 - Issues and Perspectives in Early Childhood Education

Child and Family Studies
3 credit(s) At least $1 x$ fall or spring
Major approaches, theoretical rationale, research bases, and policy issues related to child care and educational models.
COREQ: CFS 202

## CFS 345 - The Developing Infant

## Child and Family Studies

3 credit(s) Irregularly
Double Numbered with: CFS 645
Pregnancy and neonatal and child development from birth to three years. Theory and research findings: biological, psychological, and family. Systematic observations of infants. Additional work required of graduate students. PREREQ: CFS 202

CFS 355 - Children's Learning and Thinking in Culture, Contexts and Application

## Child and Family Studies

3 credit(s) At least 1 x fall or spring
Understand how children's learning and thinking develops from infancy to childhood, and how different settings and environmental interactions influence applications of the learning theories across diverse contexts and cultures.
PREREQ: CFS 202 OR PSY 205

## CFS 358 - Prosocial \& Moral Dvipmnt

## Child and Family Studies

3 credit(s) Irregularly
Theories and research on familial, societal, and cultural variables related to pro-social and moral development in infants and young children. Child observation required.
PREREQ: CFS 202

## CFS 363 - Intro to Gerontology

## Child and Family Studies

3 credit(s) At least 1x fall or spring
Multidisciplinary overview of phenomenon of human aging. Interrelationships of age-related changes and the contemporary status of older people.

CFS 365 - Language Development in Children \& Families<br>Child and Family Studies<br>3 credit(s) Irregularly<br>Double Numbered with: CFS 665<br>Psycholinguistic theories and child language research.-Social class, cultural, familial, and dialectical influences. Language enrichment programs and assessments. Systematic observations of child language required. Additional work required of graduate students. PREREQ: CFS 202

CFS 367 - Child and Family in CrossCultural Perspectives

## Child and Family Studies

3 credit(s) At least 1 x fall or spring Introduction to field methods, the study of childhood, sex roles, and family in cross-cultural perspectives.

## CFS 371 - Latino Families and Children

 in the United States
## Child and Family Studies

3 credit(s) At least 1 x fall or spring
Course explores some of the issues relevant to the understanding of Latino families and their children in the United States.

## CFS 377 - Children/Black Families

## Child and Family Studies

3 credit(s) Irregularly
Differences and similarities in environmental influences, parenting styles, cognitive development, and expectations and responsibilities of children within the black family.

## CFS 382-Immigrant Families and Children

## Child and Family Studies

3 credit(s) Irregularly
Family functioning in immigrant families in the United States. Psycho-social adjustment, physical health and well-being, economic conditions, employment patterns, parent-child relationships, schooling, identity, and community relations.

## CFS 387 - Int Rel \& Gender Roles

## Child and Family Studies

3 credit(s) At least 1x fall or spring Overview of marriage and the couple relationship in contemporary society. Relationship development, maintenance, and termination; conflict resolution skills; ethnic/ racial and cultural variations; and issues related to gender.

## CFS 388 - Human Sexuality

Child and Family Studies
3 credit(s) Every semester

Broad areas of human sexuality: the developmental and social aspects of sexuality as developed within the individual and within relationships; multicultural and multiethnic aspects of human sexuality; and those aspects of sexual behavior which represent alternatives to conventional behavior.

## CFS 389 - Leading Human Sexuality Discussion Groups

## Child and Family Studies

3 credit(s) Every semester
Preparing students to effectively lead discussion groups on human sexuality and relationships with peers.
PREREQ: CFS 388

## CFS 395 - Seminar: Family and Child Intervention

## Child and Family Studies

3 credit(s) At least 1x fall or spring
Opportunities for upper-division students to apply their knowledge bases to economic, political, and social issues that impinge on how children and families can be expected to function in the larger society.
PREREQ: CFS 201 OR CFS 202

## CFS 400 - Selected Topics

## Child and Family Studies

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

CFS 422 - Work and Family in the 21st Century

## Child and Family Studies

3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 422, WGS 422
Examines the social, demographic, and economic forces that are reshaping the boundaries between family and work.

CFS 423 - Death, Dying \& Loss: Child and Family Perspectives

## Child and Family Studies

3 credit(s) At least 1x fall or spring
Systematic understanding of developmental and conceptual framework surrounding children and youths understanding of illness, dying and death.
Concepts of bereavement, grief and loss will be examined in the context of child and family development.
PREREQ: CFS 201 AND CFS 202
CFS 425 - Lust, Love and Relationships
Child and Family Studies
3 credit(s) At least $1 x$ fall or spring

The intricate dynamics of relationships ranging from "for what and why" individuals are attracted to each other to "why and how" individuals become embroiled in seemingly irresolvable conflict across a variety of social contexts.

## CFS 430 - Intervention Models for

 Infants and Preschoolers
## Child and Family Studies

3 credit(s) Irregularly
Theory and application of models of assessment and intervention focusing on promoting positive outcomes in the areas of growth, development, health, attachment and adjustment.

## CFS 432 - Foundations and Principles of Early Childhood Education

## Child and Family Studies

3 credit(s) Every semester Includes practicum in preschool setting. Developmentally appropriate and integrated learning experiences.
PREREQ: CFS 202
COREQ: CFS 335

## CFS 433 - Child Practicum

## Child and Family Studies

3 credit(s) Every semester
Seminar and supervised internship in diverse educational and social agencies that serve the needs of children and their families. Applying theory to practice, learning to work within agencies, and identifying career goals. PREREQ: CFS 432

## CFS 447 - Principles and Practices in Parenting

## Child and Family Studies

3 credit(s) Irregularly
In-depth examination of major perspective and research on parenting practices and parent-child relationships.

## CFS 448 - Contemp Amer

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## Child and Family Studies

3 credit(s) Irregularly
Subsystems of a community. How community resources affect family systems, residential patterns, and other factors with regard to social, geographic and economic mobility.
PREREQ: CFS 201
CFS 452 - Mindfulness in Children and Youth

## Child and Family Studies

3 credit(s) At least 1x fall or spring
Double Numbered with: CFS 652
Importance of mindfulness for optimal
development in children and youth; school- and community-based interventions that target mindfulness; mindful parenting. Additional work required of graduate students.

## CFS 470 - Experience Credit

## Child and Family Studies

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## CFS 479 - Power, Conflict, Violence, and the Family

## Child and Family Studies

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: WGS 479
Introduction to power and conflict in intimate and familial relations. Neglect, abuse, molestation, rape, battering, and violence.
PREREQ: CFS 201

## CFS 486 - Family Life Education

## Child and Family Studies

3 credit(s) Irregularly
Double Numbered with: CFS 686
The course is intended to prepare students for the role of family life professionals and educators. Students will learn to apply their knowledge of family theories and other relevant theoretical perspectives to real life settings. Additional work required of graduate students.
PREREQ: CFS 201 AND CFS 202

## CFS 487 - Critical Incidents in Family Development

## Child and Family Studies

3 credit(s) Irregularly
Impact of various crises upon the family system: mental and physical health, intellectual disability, alcoholism, death, marital discord, unemployment, etc. Opportunity for investigation of areas of special interest.
PREREQ: CFS 201

## CFS 490 - Independent Study

## Child and Family Studies

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CFS 493 - Youth and Family Practicum

## Child and Family Studies

3 credit(s) Every semester

Seminar and supervised internship in the community designed to apply theory to practice by developing skills in working with children, youth and families, learning to work within an organization, and identifying career goals.
PREREQ: CFS 201 AND CFS 202

## CFS 494 - Youth and Family Practicum II

Child and Family Studies
3 credit(s) Every semester
Seminar and supervised internship designed to promote the professional development of human service workers and to identify and implement evidence-based practices with clients in a community setting.
PREREQ: CFS 493

## CFS 499 - Honors Capstone Project

## Child and Family Studies

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum
CFS 534 - Practem/Early Chldhood Ed

## Child and Family Studies

3 credit(s) Irregularly
Planning and implementing curriculum for prekindergarten or kindergarten children. Fieldwork and seminar.

## CFS 535-Quality Infant Care Giving

Child and Family Studies
2-3 credit(s) Upon sufficient interest
Crosslisted with: EDU 535
Workshop. Research theories and demonstrations of infant/toddler care, development, and assessment; group care, legal and budgeting issues, and work with parents.

CFS 557 - Sep \& Div:Impct/Chld\&Fam
Child and Family Studies
3 credit(s) Irregularly
Social and psychological issues, theories, and research.

## CFS 577 - Urban Families Strengths and Challenges

## Child and Family Studies

3 credit(s) Irregularly
Theoretical and empirical research on the challenges and opportunities for children and families living in urban settings. Issues of urban housing, family-community partnerships, crime, and criminal processing, health, urban diversity, and social science policies.

## CFS 597 - Early Childhood Program Administration

## Child and Family Studies

3 credit(s) Upon sufficient interest
Prepares students to administer, coordinate, promote, consult, and assist in the start-up and development of early childhood program services.

## Food Studies

## FST 100 - Selected Topics

Public Health, Food Studies and Nutrition 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FST 102 - Food Fights: Contemporary Food Issues

Public Health, Food Studies and Nutrition 3 credit(s) At least $1 x$ fall or spring Introduction to key issues of the contemporary food system. Explores various social, political, economic, and environmental dimensions of food production, distribution, and consumption with a focus on the United States.

## FST 200 - Selected Topics

Public Health, Food Studies and Nutrition 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FST 201 - Professional Baking

Public Health, Food Studies and Nutrition 3 credit(s) At least 1x fall or spring Fundamentals. Bakeshop production and control, formulas, basic measurement, conversions, ingredients, the baking process, basic mixes, and doughs.

## FST 202 - Agroecology

Public Health, Food Studies and Nutrition 3 credit(s) At least 1x fall or spring
Explores the biological processes that undergird the food production system on which we depend. Topics include soil fertility and quality, pest ecology, nutrient cycling and socioeconomic and policy aspects of agricultural production.

## FST 203 - Fine Pastries and Desserts

Public Health, Food Studies and Nutrition 3 credit(s) At least $1 x$ fall or spring This laboratory intensive course is designed to develop students' fundamental working knowledge and practice of the traditional and modern
methods of producing, finishing, and plating pastries and desserts.

## FST 204 - Food, Identity, and Power

Public Health, Food Studies and Nutrition 3 credit(s) At least 1x fall or spring Examines the relationship between food, identity, and power. How humans relate to food in the context of ethnicity, race, class, gender, sexuality, religion, and migration.

## FST 217 - World Cuisines

Public Health, Food Studies and Nutrition 3 credit(s) Irregularly
Traditional foods of different countries and cultures. Equipment and ingredients unique to ethnic foods.

## FST 222 - Introduction to Culinary Arts

## Public Health, Food Studies and Nutrition

 3 credit(s) Every semester Culinary theory and practice. Ingredient identification, sensory evaluation, ethnic ingredients, cultural preparation methods, and plate presentation. Menu development for noncommercial applications. Laboratory intensive hands-on preparation and practice.
## FST 300 - Selected Topics

Public Health, Food Studies and Nutrition 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FST 303-Food Movements

Public Health, Food Studies and Nutrition 3 credit(s) At least 1 x fall or spring Examination of food movements, the various efforts to address public health, social, and environmental contradictions of the conventional food system.
PREREQ: FST 102

## FST 304 - Farm to Fork

Public Health, Food Studies and Nutrition 4 credit(s) At least $1 x$ fall or spring Exploration of alternative food systems, including culinary theory and practice. Topics in contemporary food issues examined through systems perspective and practical applications. Includes field trips and cooking laboratory.

## FST 306 - Food Cooperatives

Public Health, Food Studies and Nutrition 3 credit(s) Even Academic Yr e.g. 2004-5 Introduction to marketing and bargaining cooperatives, farmers markets and Community Supported Agriculture (CSA). Topics will include
the history and current state of agricultural and food cooperatives, community kitchens, farmer's markets and CSAs.

## FST 307 - Feeding the World: Global Agri-Food Governance

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring This course explores the interaction between the structure of the global food system and consumer food choices; and how that interactive process produces environmental, food safety, food security and nutrition outcomes for all stakeholders.

## FST 309 - Philosophy \& Practice of Locavorism

Public Health, Food Studies and Nutrition 3 credit(s) At least $1 x$ fall or spring An examination, of the philosophy, politics and practice of eating locally produced food yearround. Emphasis placed on the understanding the societal ramifications of the practice of preserving locally-produced fruits and vegetables and processing game and other meat animals.

## FST 310 - Will Work for Food: Labor Across the Food Chain

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Examines labor across the US food system, including labor conditions and possibilities for reform throughout the food chain.

## FST 312 - Emergency Food Systems

Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Examination of domestic strategies to address chronic need for emergency food, with emphasis on emergency feeding in the food systems.

## FST 400 - Selected Topics

Public Health, Food Studies and Nutrition 1-3 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FST 402 - Feeding the City: Urban Food Systems

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring Investigation of relationship between food and cities, including the many ways food shapes urban sustainability, public health, community, and economic development. Additional topics include municipal food policies and urban planning for community-based food systems.

## FST 403 - The Human Right to Adequate Food and Nutrition

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Double Numbered with: FST 603 Evolution of human right to adequate food. Social, political, economic and cultural conditions influencing progressive realization of right to food and nutrition. Additional work required of graduate students.

## FST 412 - Wine Appreciation

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Wine types, varieties, terminology, labeling and regulation. Sensory evaluation of wines, wine lists and matching wine and food. Must be 21 years of age. Students can only receive credit for FST 412 or FST 422.

## FST 416 - Cultural Cuisine

Public Health, Food Studies and Nutrition 1-3 credit(s) Upon sufficient interest An exploration of various cultural cuisines. Topics explored include food and cooking, history, menus, specialty foods and cooking techniques within the context of the culture. Permission of instructor.
Repeatable 2 time(s), 3 credits maximum

## FST 421 - Morality of a Meal: Food Ethics

Public Health, Food Studies and Nutrition 3 credit(s) At least 1x fall or spring
Double Numbered with: FST 621
Food consumption and production are explored in the context of community and environment with the application of ethical theories to broad food issues and challenges. Additional work required of graduate students.

## FST 422 - Wine and Beer Appreciation

Public Health, Food Studies and Nutrition
2 credit(s) Every semester
Ingredients, processes and laws. Sensory evaluation and discussion of still and sparkling wines and beers. Student must be 21 years of age. Students may not take both FST 412 and FST 422.

## FST 423 - Food in History

Public Health, Food Studies and Nutrition 3 credit(s) Irregularly
Explore how food has shaped the world's history from prehistoric times. Discover how it is shaping the 'history' of who you are. Sophomores, juniors, and seniors.

## FST 485 - Research Experience in Food Studies

Public Health, Food Studies and Nutrition 3 credit(s) At least $1 x$ fall or spring Opportunities to conduct senior-level undergraduate research in Food Studies. PREREQ: NSD 457

## FST 486 - Food Studies Practicum

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
Supervised 85 hour field experience in food studies plus weekly seminar.
PREREQ: FST 102 AND NSD 115 AND NSD 457

## Health and Wellness

## HTW 121 - Personal and Social Health

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Examines behavioral and social factors influencing the health of young adults.

## HTW 180 - International Course

Public Health, Food Studies and Nutrition 1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HTW 200 - Selected Topics in Health \& Wellness

## Public Health, Food Studies and Nutrition

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## HTW 221 - Community Health

 Promotion
## Public Health, Food Studies and Nutrition

3 credit(s) Every semester
Health professional's role in community based health promotion and illness prevention. 15 hours of community based service learning required.

## HTW 227 - Healthy You Practicum

Public Health, Food Studies and Nutrition 1 credit(s) Every semester
Explores student interests and skills in health writing, illustration, photography and layout/ design in the context of developing a health newsmagazine for college students.

Repeatable 7 time(s), 8 credits maximum

## HTW 270 - Experience Credit

## Public Health, Food Studies and Nutrition

## 1-6 credit(s) Every semester

Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## HTW 280 - International Course

Public Health, Food Studies and Nutrition 1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HTW 290 - Independent Study

Public Health, Food Studies and Nutrition
1-6 credit(s) Every semester
In-depth exploration of a problem or problems.
Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## HTW 301 - Holistic Healing Practices

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring Explores historical backgrounds, techniques, research findings, and health impacts of selected holistic health practices. Includes guest expert demonstrations and guided participation, and opportunities for self-care. Addresses professional roles, training, certification, and resources.

## HTW 302 - Influencing Healthy Behavior

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Factors influencing the adoption and maintenance of healthy behaviors.

## HTW 303 - Community and Environmental Health

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Examination of health problems facing groups and communities, including those associated with environmental hazards.

## HTW 304-Community Health Education

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Roles, responsibilities, competencies, and ethics of community health education and population level health promotion practices. 15 hours of community-based learning experiences required. PREREQ: HTW 221

## HTW 305-Community Mental Health Promotion

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring
Examination of factors that create living conditions and environments that support mental health; including the relationship between spirituality and health.

## HTW 306 - Public Health Administrative Systems

## Public Health, Food Studies and Nutrition

3 credit(s) Every semester
The organization of the American Medical and Public Health systems. It will familiarize students with operational aspects of public health programs.

## HTW 307-Culturally Competent Health Care

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Theoretical bases for the provision of culturally competent health care. 25 hours of community based service learning required.

## HTW 309 - Health Disparities and Underserved Populations

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
Examines inequalities in health across selected populations.

## HTW 311 - Health Literacy

## Public Health, Food Studies and Nutrition

3 credit(s) At least 1x fall or spring Explores links between literacy and health; including principles of effective health communication, informed consent, and shared decision making. 25 hours of community based service learning required.

## HTW 318 - Alcohol, Other Drugs, Sex and Gambling: Dynamics of Addiction

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
The biological, psychological, and social factors of substance use and related addictions that exist across cultures and species.

## HTW 321 - Prevention in Addiction Services

Public Health, Food Studies and Nutrition
4 credit(s) At least 1x fall or spring
Double Numbered with: HTW 624
Theories, principles and strategies relevant to addiction prevention services with diverse populations. Provides an overview to the design and evaluation of addiction prevention programs. 15 hours of community based prevention activities required. Additional work required for graduate students.
PREREQ: HTW 318

## HTW 382 - Health in the Middle East

Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Crosslisted with: ANT 382, MES 382
Surveys major cultural, biological and environmental features of the Middle East and relates them to aspects of health including infectious disease, chronic disease, reproductive health, population, war, poverty and globalization.

## HTW 401 - Epidemiology

## Public Health, Food Studies and Nutrition

 3 credit(s) Every semesterMethods used in the study of the etiology, distribution, and control of disease. Requires prior completion of the Quantitative Skills Requirement. PREREQ: (MAT 121 OR MAT 194 OR MAT 221 OR MAT 285 OR STT 101) AND (MAT 122 OR MAT 222 OR MAT 285 OR MAT 286 OR PSY 252 OR MAX 201)

## HTW 402 - Implementing and Evaluating Health Programs

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
Strategies for implementing and evaluating health programs.
COREQ: HTW 304

## HTW 403 - Community-Based Health Policy and Research

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
Knowledge and skills for conducting communitybased participatory health research and its influence on affecting health policy.

## HTW 404 - Comparative Health Policy

## Public Health, Food Studies and Nutrition

 6 credit(s) Only during the summer Double Numbered with: HTW 604Overview of health systems and policies of selected developed and developing countries. Policies and programs used to address a health problem in a selected country will be compared to policy approaches in other countries. Offered only
overseas through Syracuse University Abroad.

## HTW 405-Cognitive Behavioral Approaches to Stress Reduction

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Double Numbered with: HTW 605 Students will learn mindfulness practices for professional self-care and as therapeutic modalities. Examining stressors mindfully through focused attention on the present. Separately observing the mind's cognitive and emotive reactions to present, past and anticipated events. Additional work required of graduate students.

## HTW 406 - Clinical Evaluation and Assessment of Addictions

## Public Health, Food Studies and Nutrition

3 credit(s) At least $1 x$ fall or spring Double Numbered with: HTW 606 Pre-treatment tools for engaging individuals in the evaluation and assessment of potentially problematic use of addictive and other addictive behaviors. Emphasizes the bio-psycho-social underpinnings of addictions. Role of the counselor as change agent. Additional work required of graduate students.
PREREQ: HTW 318

## HTW 407 - Motivational Interviewing for Behavioral Change

## Public Health, Food Studies and Nutrition

3 credit(s) At least 1x fall or spring Double Numbered with: HTW 607
Philosophies, practices, and outcomes of behavioral change. Motivational interviewing and solution-focused approaches to addictions and related health counseling. Individual counseling, goal setting and relapse prevention techniques. Additional work required of graduate students.

## HTW 408 - Addictions in Cultural Context

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Double Numbered with: HTW 608 Exploration of the role played by drugs in different societies, and follows the dissemination of different substances in the process of cultural encounters. Additional work required of graduate students.
COREQ: HTW 318

## HTW 409-The Impact of Addictions on Families and Relationships

Public Health, Food Studies and Nutrition 3 credit(s) At least $1 x$ fall or spring Double Numbered with: HTW 609 Knowledge of effects of chemical dependency on family, significant others and the importance
of family support in recovery. Knowledge of basic family treatment approaches. Additional work required of graduate students.

## HTW 412 - Global Perspectives in Alcohol \& Other Drug Policies

Public Health, Food Studies and Nutrition
3 credit(s) Only during the summer Double Numbered with: HTW 612 Traveling throughout Europe, this seminar course examines historical and contemporary influences of public health, drug policies, the drug war and their connections with complex trans-national economic issues such as immigration, and human trafficking. Additional work required of graduate students.

## HTW 415 - Public Health Ethics

## Public Health, Food Studies and Nutrition

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: HTW 615
Ethical issues in public health, including legal and policy responses. Role of religious and social values in setting health policy. Additional work required of graduate students.

## HTW 419 - Health Promotion: Disability

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Crosslisted with: DSP 419
Factors influencing the health \& well-being of persons with disability, including models of disability, disability history, law and services, health disparities, health promotion, ethics, violence, and disaster preparedness.

## HTW 422-Senior Capstone Internship

Public Health, Food Studies and Nutrition
9 credit(s) Every semester
Supervised professional internship in public health; 400 hours required. Seminar included.
PREREQ: HTW 121 AND HTW 221 AND HTW 302 AND HTW 303 AND HTW 304 AND HTW 307 AND HTW 311 AND HTW 402 AND HTW 403

## HTW 436 - Ethics in Addiction Services

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: HTW 636
Application of professional codes of ethics and ethical standards using case studies of ethical dilemmas within the addiction services. Additional work required of graduate students

## HTW 437 - LGBTQ Health and Well Being

Public Health, Food Studies and Nutrition
3 credit(s) Upon sufficient interest
Crosslisted with: QSX 437, SWK 437
Application of concepts from an ecological
framework to understand the micro, mezzo, macro, and social forces that impact the health and wellbeing of lesbian, gay, bisexual, transgender and queer populations.

## HTW 438 - Native American Health Promotion

Public Health, Food Studies and Nutrition 3 credit(s) At least 1x fall or spring Crosslisted with: NAT 438
Double Numbered with: HTW 638
Examines Native American culture and its contribution to wellness, including indigenous foodways, fitness and indigenous knowledge as an adjunct to chemical dependency treatment. Includes the historical roots of trauma as social determinants of health disparities. Additional work required of graduate students.

## HTW 462 - Culture and Reproductive Health and Medicine

Public Health, Food Studies and Nutrition 3 credit(s) Irregularly Crosslisted with: ANT 462, WGS 462
Double Numbered with: HTW 662 Cultural anthropological approaches to crosscultural variations in reproductive practices (pregnancy, childbirth, infertility, etc.) Impact of globalization, biomedicalization, international development on reproduction and reproductive health. Medical anthropology and gender studies.

## HTW 463 - Global Health

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring Crosslisted with: ANT 463
Double Numbered with: HTW 663
Global health in anthropological perspective. Examines how culture affects people's experience and response to morbidity and mortality. Considers topics like gender and health, reproductive health, infectious disease, health and inequality and health and war.

## HTW 470 - Experience Credit

## Public Health, Food Studies and Nutrition

 1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable
## HTW 480 - International Course

Public Health, Food Studies and Nutrition 1-12 credit(s) Irregularly Offered through SUAbroad by educational institution outside the United States. Student
registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## HTW 490 - Independent Study

## Public Health, Food Studies and Nutrition

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## HTW 499 - Honors Capstone Project

Public Health, Food Studies and Nutrition 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Nutrition Science and Dietetics

## NSD 114 - Food Safety and Quality

 AssurancePublic Health, Food Studies and Nutrition 2 credit(s) Every semester
Theory and practice of food safety and quality assurance in commercial food service operations. Origins and prevention of food-borne illness. Development and management of HACCP-based food safety systems.

## NSD 115 - Food Science I

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Explore principles of food science and preparation, including basic physical and chemical properties of food and the relationship to nutrition. Students analyze aspects of food quality and safety and apply concepts to handson production.

## NSD 216 - Restaurant and Food Service Operations

## Public Health, Food Studies and Nutrition

4 credit(s) Every semester
Principles, concepts and application of food preparation, service, supervision and management techniques. Menu planning, production control, budget and event planning.
PREREQ: NSD 115

## NSD 225 - Nutrition in Health

Public Health, Food Studies and Nutrition 3 credit(s) Every semester Nutrient requirements, functions, and sources. Interrelationships and application to food selection for healthy individuals. Weight control, sports nutrition and dietary supplements are discussed.

## NSD 275 - Food Service Systems

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Interrelationship of subsystems within food service environments. Subsystems studied include: menu development, procurement, preparation, cooking, delivery systems, sanitation, budgeting, human resource management, and facility planning.
PREREQ: NSD 115

## NSD 290 - Independent Study

Public Health, Food Studies and Nutrition
1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## NSD 312 - Cost Control in Food Services

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Systems and procedures required to establish, maintain, and control all segments of revenue and cost within the food service operation. Application to human, material, and mechanical structure of food service establishments.
PREREQ: NSD 115

## NSD 314 - Hospitality Human Resources Management

Public Health, Food Studies and Nutrition 1-3 credit(s) At least $1 x$ fall or spring Examination of human resource policies, practices, and systems required to attract, develop, and retain customer-focused employees. Emphasis on human resource issues within a diverse workforce. Instruction based classroom lecture, discussion, case studies and projects.
PREREQ: NSD 216

## NSD 326 - Practice of Dietetics

Public Health, Food Studies and Nutrition 3 credit(s) Every semester Laboratory application of nutrition science to dietetics. Introduction to tools and techniques used in dietetic practice.
COREQ: NSD 225

## NSD 329 - Pediatric Diabetes

Public Health, Food Studies and Nutrition 1 credit(s) Irregularly
An overview of causes, characteristics and nutrition guidelines and recommendations for children with diabetes.
PREREQ: NSD 326

## NSD 342 - Nutrition in the Life Span

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
Human nutritional needs related to health promotion and prevention of disease throughout the life cycle. Factors influencing nutritional status and requirements during various stages are emphasized.
PREREQ: NSD 225

## NSD 343 - Dietary Supplements

Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Explores dietary supplement regulations in USA; available supplements emphasizing weight loss, athletic performance, herbal supplements; risks and benefits, marketing, reliable information sources
PREREQ: NSD 225

## NSD 371 - Dietetics Experience I

Public Health, Food Studies and Nutrition 1 credit(s) Irregularly
Clinical experience related to nutritional needs throughout the life cycle.

## NSD 417 - Food as Medicine

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Double Numbered with: NSD 617 This course explores the landscape of food and nutrition, past and present, the role of nutrition in therapeutic lifestyle changes and the use of food as a therapeutic modality. Additional work required by graduate students. PREREQ: NSD 225

## NSD 425 - Nutrition for Fitness and Sports

Public Health, Food Studies and Nutrition 3 credit(s) Every semester Double Numbered with: NSD 625 Energy needs of activity and effect of dietary intake on performance. Special dietary requirements of specific sports and athletic activities. Dietary ergogenic aids; weight control; sports fads and myths; interaction of alcohol, caffeine, and tobacco on nutrition. Additional work required of graduate students.
PREREQ: NSD 225

## NSD 427 - Public Health Nutrition <br> Public Health, Food Studies and Nutrition

3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 627
Examines nutrition challenges and opportunities from an ecological perspective, emphasizing population-level approaches to improve nutritional status. Integrates case studies to examine challenges and programmatic and policy solutions. Prior statistics and basic nutrition course required. Additional work required of graduate students.
PREREQ: NSD 225

## NSD 447 - Weight Management, Obesity and Disordered Eating

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 647
Basic principles of weight management and role of nutrition and physical fitness in weight control. Causes, characteristics, and treatment of anorexia nervosa, bulimia, pica, and obesity; strategies for nutritional management. Additional work required of graduate students.
PREREQ: NSD 225

## NSD 452 - Mediterranean Food and Culture: A Florence Experience <br> Public Health, Food Studies and Nutrition

3 credit(s) At least 1x fall or spring Double Numbered with: NSD 652 Renowned cuisine and culture from a food studies and systems level to dietary patterns and health risks via lectures, readings, field trips and excursions from the SU Florence campus. Additional work required of graduate students. PREREQ: NSD 225

## NSD 455 - Community Nutrition

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring National, state, and local programs designed to meet food, nutrition, and health needs of vulnerable groups. Roles and functions of nutritionists in the community.

## NSD 456 - Nutritional Biochemistry

Public Health, Food Studies and Nutrition 4 credit(s) At least 1x fall or spring Structure of carbohydrates, lipids and proteins; their functions and interactions in a complex organism. Major reactions and regulation of metabolic pathways. For nutrition majors. PREREQ: CHE 106 AND CHE 116 AND BIO 216 AND BIO 217

## NSD 457 - Research and Evaluation in Nutrition

## Public Health, Food Studies and Nutrition

3 credit(s) Every semester
Integrates an understanding and application of research methods in nutrition science. Requires evaluation of current research and builds on knowledge gained from other courses and applies it to research and evaluation.

## NSD 458 - Participatory Program Planning

Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Double Numbered with: NSD 658
Participate with community of choice and research to produce a plan applying the steps of the PRECEDE-PROCEED model to develop a health promotion program. Additional work required of graduate students.
PREREQ: NSD 225

## NSD 461 - Community Nutrition Experience

Public Health, Food Studies and Nutrition 1-3 credit(s) Irregularly Site visits and field experience with national, state, and local programs designed to meet food, nutrition, and health needs of vulnerable groups. Roles and functions of nutritionists in the community. Nutrition majors only.
PREREQ: NSD 455

## NSD 466 - Advanced Nutrition

Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring Metabolic processes of the body. Interrelationships and interdependence of nutritional factors.
PREREQ: NSD 225 AND NSD 456 AND BIO 216 AND BIO 217

## NSD 470 - Experience Credit

## Public Health, Food Studies and Nutrition

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## NSD 476 - Nutrition Seminar

Public Health, Food Studies and Nutrition
1 credit(s) At least 1x fall or spring
Trends and opportunities in dietetics; entrepreneurship; quality assurance; assessment of personal and professional goals, development of career plan.

## NSD 477 - Senior Nutrition Seminar II

Public Health, Food Studies and Nutrition 1 credit(s) At least $1 x$ fall or spring Showcase the outcomes of the four year nutrition program by presenting a research portfolio engaging in a networking event and completing the fourth year assessment.
PREREQ: NSD 476

## NSD 481 - Medical Nutrition Therapy I

## Public Health, Food Studies and Nutrition

3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 681
Nutrition problems in adapting food habits for physical and metabolic alterations caused by selected disease states, within the context of the nutrition diagnostic and care process. Additional work required of graduate students. PREREQ: NSD 225 AND BIO 216 AND BIO 217

## NSD 482 - Medical Nutrition Therapy I Lab

Public Health, Food Studies and Nutrition 1 credit(s) At least $1 x$ fall or spring Double Numbered with: NSD 682 Application of the nutrition care process, model, and diagnostic language for selected disease states to solve clinical nutrition problems. Additional work required of graduate students. PREREQ: NSD 225 AND BIO 216 AND BIO 217 COREQ: NSD 481

## NSD 483 - Medical Nutrition Therapy II

Public Health, Food Studies and Nutrition
3 credit(s) At least $1 x$ fall or spring Double Numbered with: NSD 683 Nutrition problems in adapting food habits for physical and metabolic alterations caused by selected disease states within the context of the nutrition diagnostic and care process. Continuation of NSD 481/681. Additional work required of graduate students.
PREREQ: NSD 481

## NSD 484 - Medical Nutrition Therapy II Lab <br> Public Health, Food Studies and Nutrition 1 credit(s) At least $1 x$ fall or spring Double Numbered with: NSD 684 Application of the nutrition care process, model, and diagnostic language for selected disease states to solve clinical nutrition problems. Continuation of NSD 482/682. Additional work required of graduate students. <br> PREREQ: NSD 482 <br> COREQ: NSD 483

## NSD 490 - Independent Study

Public Health, Food Studies and Nutrition
1-6 credit(s) Every semester

Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## NSD 497 - Research Experience

Public Health, Food Studies and Nutrition 1-3 credit(s) Irregularly Laboratory, clinical, or community-based research under direct supervision of NSD department faculty. Projects incorporate use of scientific methods, (quantitative and qualitative), data analysis, presentation and interpretation, and the responsibilities of research integrity. Repeatable 5 time(s), 6 credits maximum

## NSD 499 - Honors Capstone Project

Public Health, Food Studies and Nutrition
1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## NSD 500 - Selected Topics

Public Health, Food Studies and Nutrition 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NSD 505 - Nutritional Biochemistry Overview

Public Health, Food Studies and Nutrition
1 credit(s) At least 1x fall or spring
Brief overview of structure/function of atoms and molecules of biological importance. Structure/ function of proteins, carbohydrates and lipids in the complex biological environment. Introduction to metabolic pathways involved in utilization of energy nutrients.
PREREQ: CHE 106

## NSD 511 - Nutrition Education

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
A theoretical basis for nutrition education and opportunity to develop skills for a wide variety of individuals.
PREREQ: NSD 225 AND NSD 342

## NSD 512 - Nutrition Counseling

Public Health, Food Studies and Nutrition
3 credit(s) Every semester
A theoretical basis for counseling related to nutrition and increased opportunities to develop nutrition counseling skills for a wide variety of individuals.
PREREQ: NSD 225 AND NSD 342 AND NSD 511

## NSD 513 - Nutrition Education Experience

Public Health, Food Studies and Nutrition
1 credit(s) Every semester
Prepare, disseminate and evaluate nutrition education curriculum for peer or other audiences. Provide nutrition education on campus and in the community through table events, group presentations, and media campaigns. PREREQ: NSD 511
Repeatable 4 time(s), 5 credits maximum

## NSD 515 - Physical Assessment and Multiskilling for Dietitians

Public Health, Food Studies and Nutrition 1 credit(s) Every semester Practice and skill validation in basic cardiovascular, respiratory, abdominal, muscular, and integumentary assessment. Diabetes and enteral feeding management.
COREQ: NSD 481 OR NSD 681

## NSD 555 - Food, Culture and Environment

Public Health, Food Studies and Nutrition 3 credit(s) Every semester
Crosslisted with: WGS 555
Understand the environment in which nutrition education and communication occur. The broader environment includes cultural diversity, the food system from farm to table, as well as functionality of food components.
PREREQ: NSD 115 AND NSD 225

## Sport Management

## SPM 101 - Personal and Social Responsibility

## Sport Management

3 credit(s) At least 1x fall or spring Designed to assist students in coping with the transition and challenges of college, athletic life, and beyond. The course will promote students' ownership of their academic, athletic, personal and social responsibility.

## SPM 199 - The Super Bowl: Sport, Culture and Entertainment

## Sport Management

3 credit(s) Irregularly
The evolution and strategic brilliance that has allowed a football game to become a social phenomena with international audiences, business impact, and cultural implications.

## SPM 200 - Selected Topics in Sport Management

Sport Management
1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SPM 201 - Professional Development in Sport Management

Sport Management
1 credit(s) Every semester
Using a blend of theory, skill development, and practical application, students will gain the knowledge and ability to successfully prepare for the Senior Capstone Experience

## SPM 205 - Principles and Contemporary Issues in Sport Management

Sport Management
3 credit(s) Every semester Overview of the sport industry through examination of problems and issues faced by contemporary sport managers. Unique characteristics of sport and resulting social and ethical responsibilities of sport managers are discussed using case study method.

## SPM 215 - Principles of Sales in Sport

## Sport Management

3 credit(s) Every semester
Sales promotions and management principles required for successful selling in the sport industry. Topics include identification of product segments and markets for ticket sales, promotions, sponsorship, and merchandise. PREREQ: SPM 205

## SPM 219 - Catering

## Sport Management

3 credit(s) Irregularly
Planning, organizing, pricing and contracting for special events in off and on premise situations. Menu development and sanitation, staffing, equipment requirements and constraints. Practical application through catered functions throughout the semester.

## SPM 224 - Introduction to Sport Event Management

Sport Management
3 credit(s) Irregularly
Students will gain knowledge of the principles and procedures for planning, managing, and implementing a variety of sporting events through an examination of: promotions, marketing, ticketing, hiring, event logistics, risk management, volunteer management, budgeting, and contracts.

## SPM 225 - Managing the Sport Organization

## Sport Management

3 credit(s) Every semester
Application of management concept and theories to sport organizations and the sport industry. Includes issues of leadership, ethics, organizational design, strategic planning, labor relations, diversity, globalization, and organizational changes.
PREREQ: SPM 205

## SPM 270 - Experience Credit

## Sport Management

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## SPM 290 - Independent Study

## Sport Management

1-6 credit(s) Every semester In-depth exploration of a problem or problems. Individual independent study based on a plan submitted by the student. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## SPM 295 - Research Methodology

## Sport Management

3 credit(s) Every semester
Introduction to the basic elements of sport research with an emphasis on APA writing style. PREREQ: SPM 205 AND WRT 105
COREQ: MAT 221

## SPM 300 - Selected Topics

## Sport Management

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SPM 305 - Principles of Sport Hospitality Management

## Sport Management

3 credit(s) Irregularly
Hospitality industry as it relates to Sport Management. Examines the lodging, food and beverage, and travel/transportation logistics for sport participants and spectators.

## SPM 309 - Sports Arena Management

## Sport Management

3 credit(s) At least 1x fall or spring
Discussion of growth of spectator sports; construction of arenas, stadiums, coliseums and convention centers; the complexities of managing facilities, products, services, labor, security and special events.

## SPM 315 - Sport Finance

## Sport Management

3 credit(s) Every semester
Analysis of the relationship between finance and the sport industry. Focuses on the financial and economic aspects of sport organizations and on current financial issues relating to professional, collegiate, and Olympic-level sport.
PREREQ: SPM 205

## SPM 316 - Sport Data Analytics

## Sport Management

3 credit(s) At least 1 x fall or spring
Analyzing and interpreting sport data through analytical procedures. Current advanced statistics will be introduced, discussed, and computed across a variety of professional and college sports. PREREQ: MAT 183 AND 221

## SPM 324-Sport Event Sponsorship

## Sport Management

3 credit(s) Irregularly
Overview of all elements of sport event sponsorships, including rationale, benefits, proposal development, and solicitations. Students will have the opportunity to apply theoretical concepts through proposal writing and solicitation of sponsorships to an existing sport event.

## SPM 325 - Sport Communications

## Sport Management

3 credit(s) Every semester
Role of communications in management, news release writing, working with and utilizing the various forms of media, the expanding use of the Internet in sport communications, crisis management, pitching stories, interviews, and ethical issues.
PREREQ: SPM 205

## SPM 334 - Sport Event Promotion

## Sport Management

3 credit(s) Irregularly
An overview of promotional principles used in marketing sport events with a focus on strategies of promotional campaigns, public relations, as well as promotional theory. Students will apply theoretical concepts to a promotional campaign for an existing sport event.
PREREQ: SPM 205

## SPM 335 - Sport Venue, Beverage, Catering and Food Management

## Sport Management

3 credit(s) Irregularly
An overview of food, beverage, and catering operations in a variety of sport events; crucial business aspects of catering operations in sport venues; instruction includes site visits.

## SPM 340 - Sports, Media and Society

## Sport Management

3 credit(s) Irregularly
The relationship between sport, media and the broader society. Students will explore the interrelationship of the principal mediums, gender, race, identity, sport and the society at-large.
PREREQ: SPM 205

## SPM 345 - Technology in Sport Management

## Sport Management

3 credit(s) At least 1x fall or spring A survey of communication and management technologies in the sport industry. Includes topics of information management, ticketing systems, scoreboard and video-board management, web and graphic design, publication layout and design, statistics management, and facilities operations. PREREQ: SPM 205

## SPM 346 - Sport in American Society

## Sport Management

3 credit(s) At least 1x fall or spring This course will study the impact of sport on American society, and how our culture has influenced the development of sports, governing bodies, teams and leagues. This course puts today's sports landscape into historical perspective.

## SPM 350-Sports Ticket Sales

## Sport Management

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: SPM 650
Sports ticket sales process and best practices. Simulated ticket sales environments, application of sales practices and connecting with industry sales professionals. Additional work required of graduate students.
PREREQ: SPM 215

## SPM 356-Olympic Sport Management

## Sport Management

3 credit(s) At least 1x fall or spring
Ancient and Modern Olympic Games' influence on contemporary sport. Business and competitive athletic aspects in the history of Modern Games. Influences of and organization of International Olympic Committee, National Olympic Committees, and International Sports Federations.

## SPM 357-Olympic Odyssey

## Sport Management

3 credit(s) At least 1x fall or spring
The Olympic movement from Ancient Games to modern Olympics is studied by visiting sites rich in international sport history. Governance, economics, culture and history of Olympic sport is examined in major Olympic cities throughoutEurope.

## SPM 358 - Sport Management LA Immersion

## Sport Management

3 credit(s) At least $1 x$ fall or spring Differentiates governance structure among multiple professional sports and distinguishes organizational management strategies among sports media, event planning, marketing, athlete representation, facilities management and professional and intercollegiate teams. Intensive spring break travel and field study course. PREREQ: SPM 205

## SPM 381 - International Sports <br> Relations

## Sport Management

3 credit(s) Irregularly
Through case studies, this course will examine sport's power as a tool in the domestic and international political arenas. Students will learn how sport can smother dissent, promote hypernationalism, protest injustice, and inspire better relations.
PREREQ: SPM 205

## SPM 395 - Psycho-Social Issues of Sport

## Sport Management

3 credit(s) At least 1x fall or spring An in-depth analysis of the psychosocial aspects of sport. Varied psychological and sociological topics as they relate to sport/exercise participation, performance, and enjoyment. PREREQ: SPM 205

## SPM 415 - Sport Law

## Sport Management

3 credit(s) Every semester
Introduction and application of law to the sports industry. Legal concepts covered are agency, contract, labor, antitrust, tort, and criminal laws. Special focus on contemporary issues in sports including diversity, Title IX, drugs, and disabilities. PREREQ: SPM 205

SPM 444 - Sports Marketing
Management
Sport Management
3 credit(s) Every semester

Analytical examination of the sport industry from the strategic marketing perspective of the organizations involved. Emphasizing writing and proposal design.
PREREQ: SPM 205

## SPM 455 - Senior Sport Management Capstone

## Sport Management

12 credit(s) Every semester
Supervised professional work experience in the sport industry through positions in professional and intercollegiate sports, arenas, sport marketing and management firms, and other sport entities. Analysis paper and oral presentation required. PREREQ: SPM 201 AND SENIOR STANDING

## SPM 470 - Experience Credit

## Sport Management

1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor and dean. Limited to those in good academic standing. Repeatable

## SPM 490 - Independent Study

## Sport Management

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study based on a plan submitted by the student. Permission in advance with the consent of the department chairperson, instructor and dean. Limited to those in good academic standing.
Repeatable

## SPM 499 - Honors Capstone Project

## Sport Management

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
PREREQ: SPM 201

## Social Work

## SWK 115 - Introduction to Social Work

## School of Social Work

3 credit(s) At least 1x fall or spring Roles social workers assume in professional practice; social context within which practice occurs; major fields of practice; field trips to local agencies.

## SWK 201 - Social Work Practice Skills Laboratory I <br> School of Social Work <br> 3 credit(s) At least 1x fall or spring Laboratory exercises to develop basic social work skills with individuals, families, and groups. Relevant practice contexts and theoretical background provided for the exercises.

## SWK 202 - Social Work Practice Skills Laboratory II

## School of Social Work

3 credit(s) At least 1 x fall or spring Laboratory exercises to develop basic social work skills with agencies, organizations, and communities. Relevant practice contexts and theoretical background provided for the exercises.

## SWK 301 - Foundations of Social Work Practice

## School of Social Work

3 credit(s) At least 1 x fall or spring
Experiential education using classroom instruction and community practice to integrate theory, skill development and practice experience. Establish competency in beginning generalist practice behaviors. Social Work majors only.
PREREQ: SWK 201 AND SWK 202

## SWK 314 - Social Welfare Policy and Services I

## School of Social Work

3 credit(s) At least 1x fall or spring
Historical and contemporary social welfare policy and programs. Influence of social, political, and economic forces. Implications of prejudice and discrimination. Poverty and income maintenance alternatives.

## SWK 315 - Social Welfare Policy and Services II

## School of Social Work

3 credit(s) At least 1x fall or spring Structure and organization of public and voluntary income maintenance, health, mental health service delivery system. Cultural, racial, ethnic, gender diversity. Policy analysis frameworks. Social work roles, values.

## SWK 326 - Persons in Social Context

School of Social Work
3 credit(s) At least $1 x$ fall or spring Crosslisted with: WGS 326
Assessment of behavior of diverse individuals, groups, and social systems. Applying concepts from the biological, behavioral, and social sciences in identifying and understanding forms and causes of behavior.

## SWK 328 - Human Diversity in Social Contexts

## School of Social Work

3 credit(s) At least 1x fall or spring Crosslisted with: WGS 328
Diversity, including race, gender, sexual orientation and selected topics. Examines individual, group, and institutional identity formation. Theories of biopsychosocial development, reference group affiliation, social stratification, oppression, and institutional discrimination. Implications for social work practice.

## SWK 357 - Processes of Aging

## School of Social Work

3 credit(s) At least 1x fall or spring Double Numbered with: SWK 657 Intrinsic aging processes, changing needs, and characteristics of aging populations, and the impact of age related forces in American society, with special attention to aged groups disadvantaged by virtue of race, ethnicity, gender, sexual orientation, disability, and poverty. Additional work required of graduate students.

## SWK 361 - Foundations of Social Work Research

## School of Social Work

3 credit(s) At least $1 x$ fall or spring Research methods including problem formulation, measurement, sampling, research design, data collection and analysis, and report preparation. Application of research methods to critical analysis of research reports and to issues associated with evaluation of social work practice.

## SWK 400 - Selected Topics

## School of Social Work

1-6 credit(s) At least $1 x$ fall or spring
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SWK 401 - Strategies of Social Work Intervention I

## School of Social Work

3 credit(s) At least 1x fall or spring Preparation for beginning social work interventions. Theories of practice and rehearsal of problem solving and communication skills with individuals, families, and groups in client, target, and action systems. Concurrent field placement. PREREQ: SWK 301 AND (SWK 326 OR WGS 326) AND (SWK 328 OR WGS 328)
COREQ: SWK 435 AND SWK 436

## SWK 402 - Strategies of Social Work Intervention II

## School of Social Work

3 credit(s) At least $1 x$ fall or spring Design, implementation, and evaluation of intervention strategies in social work practice. Intervention with individuals, families, and groups in the context of agencies, organizations and communities. Concurrent field practicum. PREREQ: SWK 401 AND (SWK 326 OR WGS 326) AND (SWK 328 OR WGS 328)
COREQ: SWK 445 AND SWK 446

## SWK 435 - Field Practicum I

## School of Social Work

5 credit(s) At least 1x fall or spring
Field practice experience in a selected social service agency setting to apply and integrate skill, cognitive, and affective learning within a formalized service system.
COREQ: SWK 401 AND SWK 436

## SWK 436 - Field Seminar I

## School of Social Work

1 credit(s) At least 1x fall or spring Integration of theory and practice through cognitive examination of students actual field experience associated with SWK 435.
COREQ: SWK 401 AND SWK 435

## SWK 437 - LGBTQ Health and Well Being

## School of Social Work

3 credit(s) Upon sufficient interest Crosslisted with: HTW 437, QSX 437 Application of concepts from an ecological framework to understand the micro, mezzo, macro, and social forces that impact the health and wellbeing of lesbian, gay, bisexual, transgender and queer populations.

## SWK 445 - Field Practicum II

## School of Social Work

5 credit(s) At least 1x fall or spring
Field practice experience in selected social service setting to apply and integrate skill, cognitive and affective learning within a formalized service system.
PREREQ: SWK 401 AND SWK 435 AND SWK 436 COREQ: SWK 402 AND SWK 446

## SWK 446 - Field Seminar II

## School of Social Work

1 credit(s) At least 1 x fall or spring Integration of theory and practice through cognitive examination of student's actual field experiences associated with SWK 445. PREREQ: SWK 401 AND SWK 435 AND SWK 436 COREQ: SWK 402 AND SWK 445

## SWK 450 - Topics in Gerontology

## School of Social Work

1-6 credit(s) Upon sufficient interest Modules focused on current issues, developments, and methods in gerontological social work. Emerging developments in theory, legislation, programming, and priorities among selected aging populations. Topics vary each semester. Repeatable

## SWK 458 - Practice and Policy in Adult Corrections

## School of Social Work

3 credit(s) Upon sufficient interest Double Numbered with: SWK 658
Overview of adult corrections. Criminal justice policies related to ethnicity, poverty, gender. Substance use, health and disability, and violence are explored within the context of correctional setting and offender populations. Applications to social work practice.

## SWK 470 - Experience Credit

## School of Social Work

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## SWK 482 - Introduction to Equine Assisted Activities and Therapies

## School of Social Work

3 credit(s) Only during the summer
Double Numbered with: SWK 682
Therapeutic use of horses with children and adults experiencing various physical, cognitive, and emotional challenges; nature of horses in healing; research on EAAT. Classroom instruction and experiential learning onsite with an established therapeutic horsemanship program. Additional work required of graduate Students.

## SWK 490 - Independent Study

## School of Social Work

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study based on a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## SWK 499 - Honors Capstone Project

## School of Social Work

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under
the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## David B. Falk College of Sport and Human Dynamics Faculty

Keith A. Alford, Associate Professor, Social Work Ph.D., Ohio State University, 1997
Colleen Baish Cameron, Professor of Practice, Child and Family Studies
M.ED., University of Nevada, 2003

Tim Barr, Instructor, Food Studies
B.S., Rochester Institute of Technology, 1971

Anne C. Bellows, Professor, Food Studies Ph.D., Rutgers University, 1999
Dessa Bergen-Cico, Associate Professor, Public Health
Ph.D., Syracuse University, 1992
Lynn S. Brann, Assistant Professor, Nutrition
Ph.D., University of Tennessee, 2003
Maria Brown, Assistant Research Professor, Social Work
Ph.D., Syracuse University, 2010
Jane Burrell Uzcategui, Instructor, Nutrition
M.S., Finch University of Health Related Sciences, 2002
Rick Burton, David B. Falk Endowed Professor of Sport Management
M.B.A., Marquette University, 1991

James R Byrne, Professor of Practice, Public Health
J.D., University of Connecticut, 1985

Paul Caldwell, Associate Professor, Social Work Ph.D., Brandeis University, 1995
D. Bruce Carter, Associate Professor, Child and Family Studies
Ph.D., University of Virginia, 1980
Deborah Coolhart, Assistant Professor, Marriage and Family Therapy
Ph.D., Syracuse University, 2006
Kenneth N. Corvo, Associate Professor, Social Work
Ph.D., Case Western Reserve University, 1993
Luvenia W. Cowart, Professor of Practice, Public Health
Ed.D., Syracuse University, 1980
Ellen deLara, Associate Professor, Social Work Ph.D., Cornell University, 2000

Thom deLara, Professor of Practice, Chair, Marriage and Family Therapy
M.S.W., Syracuse University, 1975

Kendra DeLoach McCutcheon, Assistant Professor,
Social Work
Ph.D., University of South Carolina, 2010
Dennis Deninger, Professor of Practice, Sport Management
B.A., Syracuse University, 1973
L. Beth Dixon, Professor, Nutrition

Ph.D., Pennsylvania State University, 1994
Joseph P. Fanelli, Instructor, Child and Family Studies
Ph.D., Syracuse University, 1980
Rashmi Gangamma, Assistant Professor, Marriage and Family Therapy
Ph.D., Ohio State University, 2008
Alejandro Garcia, Professor, Social Work Ph.D., Brandeis University, 1980
Mary E. Graham, Professor, Sport Management Ph.D., Cornell University, 1995
Brooks B Gump, Falk Family Endowed Professor of Public Health
Ph.D., University of California, San Diego, 1995
Tanya M. Horacek, Professor, Nutrition
Ph.D., University of Nebraska, 1996
Pamela J Johnson, Assistant Professor, Social Work Ph.D., Case Western Reserve University, 2010
Eunjoo Jung, Associate Professor, Child and Family Studies
Ed.D., Illinois State University, 2004
Irene Kehres, Associate Dean, David B. Falk College of Sport and Human Dynamics, Professor of Practice, Child and Family Studies Ph.D., Syracuse University, 2004
Mary Ann P. Kiernan, Instructor, Food Studies M.B.A., Syracuse University, 2012

Eric Kingson, Professor, Social Work
Ph.D., Brandeis University, 1979
Karen E. Kirkhart, Professor, Social Work Ph.D., University of Michigan, 1979
Ambika Krishnakumar, Associate Professor, Child and Family Studies
Ph.D., University of Tennessee, 1997
Sandra D. Lane, Professor, Public Health Ph.D., University of California at San Francisco and Berkeley, 1988
Eileen Lantier, Senior Associate Dean, David B. Falk College of Sport and Human Dynamics, Associate Professor, Public Health
Ph.D., Syracuse University, 1992
David Larsen, Assistant Professor, Public Health Ph.D., Tulane University, 2013
Teresa MacDonald, Instructor, Child and Family Studies
Ph.D., Syracuse University, 2007
Katherine McDonald, Associate Professor, Public Health

Ph.D., University of Illinois at Chicago, 2006
Mary Ann Middlemiss, Associate Professor, Public Health
Ph.D., Syracuse University, 1987
Laura-Anne Minkoff-Zern, Assistant Professor, Food Studies
Ph.D., University of California, Berkeley 2012
Deborah J. Monahan, Associate Dean, David
B. Falk College of Sport and Human Dynamics,

Professor, Social Work
Ph.D., University of Arizona, 1985
Robert P. Moreno, Associate Professor, Chair, Child and Family Studies
Ph.D., Stanford University, 1995
Nancy R. Mudrick, Professor, Social Work
Ph.D., Brandeis University, 1976
Matthew Mulvaney, Associate Professor, Child and Family Studies
Ph.D., University of New Hampshire, 2004
Diane Lyden Murphy, Dean, David B. Falk College
of Sport and Human Dynamics, Associate
Professor,
Social Work Ph.D., Syracuse University, 1983
Tracey Musarra Marchese, Professor of Practice, Social Work
M.S.W., Rutgers University, 1993

Lutchmie Narine, Associate Professor, Public Health
Ph.D., University of Toronto, 1993
Lisa Olson-Gugerty, Instructor, Public Health
Ph.D., Nova Southeastern University, 2005
Rodney Paul, Professor, Sport Management
Ph.D., Clemson University, 2000
Gina Pauline, Associate Professor, Sport
Management
Ed.D., Ball State University, 2006
Jeff Pauline, Associate Professor, Sport
Management
Ed.D., West Virginia University, 2001
Sudha Raj, Associate Professor, Nutrition
Ph.D., Syracuse University, 1991
Kamala Ramadoss, Associate Professor, Child and Family Studies
Ph.D., Purdue University, 2008
Rachel Razza, Associate Professor, Child and Family Studies
Ph.D., Pennsylvania State University, 2005
Jaipaul L. Roopnarine, Professor, Jack Reilly
Professor of Child and Family Studies
Ph.D., University of Wisconsin, 1980
Patrick T. Ryan, Instructor, Sport Management B.S., State University of New York at Geneseo, 1975

Sarah H. Short, Professor, Nutrition
Ph.D., Syracuse University, 1975

Merril Silverstein, Marjorie Cantor Endowed Professor in Aging, Social Work
Ph.D., Columbia University, 1990
Carrie Jefferson Smith, Associate Professor, Director, Social Work
D.S.W., Howard University, 1998

Yvonne Smith, Assistant Professor, Social Work Ph.D., University of Chicago, 2013

Matthew Spitzmueller, Assistant Professor, Social Work
Ph.D., University of Chicago, 2014
Kay Stearns Bruening, Associate Professor, Nutrition
Ph.D., New York University, 1997
Linda Stone Fish, Falk Family Endowed Professor of Marriage and Family Therapy
Ph.D., Purdue University, 1985
Maureen Thompson, Associate Professor, Public Health
Ph.D., Syracuse University, 1990
Elizabeth Brown Thoreck, Instructor, Social Work LMSW, Syracuse University, 1993
Michael D. Veley, Rhonda S. Falk Endowed Professor, Director and Chair, Sport Management M.P.S., Cornell University, 1982

Margaret Voss, Professor of Practice, Nutrition Ph.D., Syracuse University 2002

Patrick T. Walsh, Assistant Professor, Sport Management
Ph.D., University of Minnesota, 2008
Dyane Watson, Instructor, Marriage and Family Therapy
Ph.D., Michigan State University, 2007
Evan Weissman, Assistant Professor, Food Studies Ph.D., Syracuse University, 2012
Rick Welsh, Chair, Public Health, Food Studies and Nutrition, Professor, Food Studies
Ph.D., Cornell University, 1995
Jennifer Wilkins, Daina E. Falk Professor of Practice in Nutrition
Ph.D., Washington State University, 1991
John Wolohan, Professor, Sport Management
J.D., Western New England University, 1992

# School of Information Studies 

Jeffrey Stanton, Interim Dean
Hinds Hall
ischool.syr.edu

## About the School

The Syracuse University School of Information Studies (iSchool) is a leading University center in advancing both the theory and practice of the information professions, based on an interdisciplinary view of information phenomena. The iSchool at Syracuse-the original information school-is a leader in the information field, which lies at the intersection of management, technology, and people. The iSchool offers an innovative curriculum that is continuously updated to meet future industry trends and incorporate rapidly changing technologies. The iSchool at Syracuse University is currently ranked No. 1 in information systems, according to U.S. News \& World Report.
Our approach stands out from other institutions that offer computer science, management, information science, and related programs in that our focus is on users and user information needs as a starting point for integrating information and information technology into organizations. The faculty combines expertise in information systems, linguistics, computer science, library science, education, business management, school media, digital literacy, management information systems, data science, telecommunications, wireless and emerging technologies, and communication. The faculty are very active in research topics that reflect their diverse intellectual backgrounds and interests.

## The Central Themes of the School of Information Studies

Five basic themes express the school's research and teaching mission. These themes define our vision of the information field and provide a focus for both the design of our curriculum and our sponsored research.
The Interrelationship Among the Five Central Themes of the School of Information Studies:
Information and Telecommunications Management considers information and technologies within organizational contexts.
Information in the Marketplace relates how organizations interact with each other and exchanging information and products.
Information Representation and Retrieval forms the building blocks of information systems as well as the processes necessary to enable
humans to access and use information.
Human-Information Interaction focuses on people and how the individual or group seeks and uses the products of information representation and retrieval.

Information and Society considers the implications and issues for culture and society of the broad scope of information systems and technologies.
The School of Information Studies offers the following degree programs:

## Undergraduate

Information Management and Technology, BS
Systems and Information Science, BS
Dual Major with the Martin J. Whitman School of Management
Dual Major with the S.I. Newhouse School of Public Communication

Information Management and Technology Minor
Global Enterprise Technology Minor
Information Technology, Design, and Startups Minor

## Graduate

Library and Information Science, MS
Library and Information Science: School Media, MS
Information Management, MS
Telecommunications and Network Management, MS

Executive Master of Science in Information Management
Information Science and Technology, PhD Information Management, DPS

## Certificates of Advanced Study

Cultural Heritage Preservation, CAS
Data Science, CAS
E-Government Management and Leadership, CAS
Information Security Management, CAS
Information Systems and Telecommunications Management, CAS

School Media, CAS

## Message from the Dean

Jeffrey Stanton,
The greatest challenge facing us in our increasingly digital world is the potential for the wealth of information that now exists to create a poverty of attention. We as a society need to
better organize, represent, locate, and provide information efficiently and effectively, or risk being consumed by this overabundance of information. That's where the Syracuse University School of Information Studies (iSchool) makes one of its most significant contributions.
Our vision is to expand human capabilities through information. What matters is that we make a difference in everything we do, and that this difference is a positive one affecting individuals, organizations, and ultimately society. We intend to add value to society through education and through the information, systems, and services we help to create. We pledge to do this ethically, competently, professionally, with respect for the individual, and with passion.
We connect people to the information they seek so they can make the best decisions for their organizations-whether their business is commerce, government, entertainment, communications, medicine, education, or human services. All of these organizations make decisions and take actions based on the information that is known. Our graduates ensure that they have the most accurate and appropriate information from which to base those decisions.

Originally founded as a library science school in 1896, our school was the first in its field to embrace the information revolution by becoming the Original Information School in 1974.
Today, the iSchool is ranked No. 1 in information systems for library and information schools by U.S. News and World Report and serves as a model for other information schools that are emerging around the globe.
Our expertise in information management is attracting the attention of companies as well as governments and organizations around the globe that compete to recruit our graduates. Our faculty members are working with global leaders in the information technology industry in research and curriculum development in such areas as green data centers, global collaboration, big data, and identity management and access control.
We educate our library and information science students to take leadership positions in and to develop forward-looking policies and guidelines for libraries and other organizations. Our school media faculty members and graduates are changing policies to improve the quality of education and to motivate learning in students of all ages.
Our faculty and alumni of the telecommunications and network management program are reshaping Internet governance and telecommunications policies around the globe, securing our networks and information systems, and expanding access to information communication and technology through innovative product design and implementation.

Our faculty members are masters of many academic fields and work across traditional disciplinary lines, and they teach our students to do the same. This unified diversity is the strength of the school as well as of the information field itself. The information profession is the field of the future, and we invite you to become part of this future. Let us provide you with the skills to achieve positive change at the intersection of management, technology, and people.

Join us!

## Vision and Values

The School of Information Studies, established in 1896 and renamed as the first Information School in 1974, has a long tradition of leading innovation and change. Our ideals and values are the foundation for our success.

## Our Vision

To expand human capabilities through information.

What matters is that we make a difference in everything we do, and that this difference is a positive one affecting individuals, organization, and ultimately society. We intend to add value to society through education and through the information, systems, and services we help to create. We pledge to do this ethically, competently, professionally, with respect for the individual, and with passion.

## Our Values

Inquiry. We are dedicated to exploration. Exploration and innovation are critically important to the information field and a vital part of our school. We share the university's vision of being a leading student-centered research university by dedication to being a student-centered research college. We promote this aim through discovery, development, application, integration, and active learning.
Individuality. We are committed to the individual. High-performance organizations are composed of high-performance individuals. Our faculty, staff, students, and partners are risk takers who have a high tolerance for ambiguity. While we value our work together in a highly spirited team atmosphere, we value the individual, and respect individuality as such. Our organizational norms dictate that we are relentless in attacking problems, but supportive in valuing individual differences.

Diversity. We are intellectually diverse. Complex problems require multidimensional and interdisciplinary analysis and solutions. The school fosters a multiplicity of "voices" addressing the important areas of teaching and
research in the information field. The school seeks faculty from many related disciplines who respect a diversity of opinion and perspective, and thrive on the tension of discussion and debate.

Adaptability. We are adaptive and able to evolve. Today's competitive, complex, and everchanging environment requires innovation, flexibility, and rapid responses. Our initiatives and developmental processes are driven by a Do-Learn-Revise model. This model encourages entrepreneurship and risk-taking, celebrating success as a community achievement and embracing challenge as a learning opportunity.

Unity. We are a faculty of one. The faculty sits as a whole, not as individuals or groups who represent one specific program in which they teach or ascribe affiliation. Students and faculty are challenged to benefit from the paradox of a single information field manifested in many professional expressions. Students and faculty learn from each other by shared intellectual experiences and by appropriate curriculum integration across the degree programs.
Continuity. We are an enduring organization. With over a century of innovation and leadership behind us, the school makes an enduring contribution to our field. In building our school we concentrate on building an enduring organization that goes beyond the influence of any particular dean or member of the faculty.

## Our Goal

To transform the information field through leadership in research, development, and education.

## Our Points of Distinction

Whatever we do, we do through information and for people

Through information we transform individuals, organizations, and society
We recognize that information technology and management processes are means and not ends

## Research Centers

Many of the faculty conduct their research individually and in small, flexible, interdisciplinary teams. For certain specialized areas and crossunit collaborations, however, research centers and laboratories provide a venue that supports longterm commitment to a particular research area. The following research centers and laboratories are located in the school:
Center for Convergence and Emerging Network Technologies CCENT The mission of CCENT
is to understand the future of networking technologies, and to engage students, faculty and industry in the process of defining and shaping that future. CCENT currently has setup four testbeds for studying emerging network technologies, including wireless networking, network security, unified communication systems, Internet protocol version 6.
Center for Digital Literacy CDL is an interdisciplinary, collaborative research and development center at Syracuse University dedicated to (1) understanding the impact of information, technology, and media literacies on children and adults (particularly those from underserved populations) in today's technology-intensive society and (2) studying the impact having or not having these literacies has on people, organizations, and society.

Center for Information and Systems Assurance and Trust Established in June 2009, CISAT promotes the exploration of new ideas in information and systems assurance and trust by bringing together faculty from seven schools and colleges at Syracuse University: the School of Information Studies, L.C. Smith College of Engineering and Computer Science, College of Law, Maxwell School of Citizenship and Public Affairs, Newhouse School of Public Communications, Whitman School of Management, and the College of Arts and Sciences, who share a common vision of improving society through the creation of trustworthy systems.
Center for Natural Language Processing CNLP advances the development of human-like language understanding software capabilities for government, commercial, and consumer applications.

Information Institute of Syracuse IIS is a long standing research center in the areas of education, technology and librarianship. Its projects bring together universities, government agencies, and private enterprises to promote easy access to high quality educational information to a diverse user population.
Behavior, Information, Technology and Society (BITS) Lab is the home of an inter-disciplinary team of researchers who develop cutting-edge applications, tools, and software, and engage in innovative studies of how people use information and communication technologies and how their use of these technologies affect society.
Social Computing Systems Lab (SALT) focuses on systems research in social computing. Researchers seek a deep understanding of how people interact with sociotechnical computing systems, and develop original designs that either enable new forms of user/ social interaction or impact existing user/social interaction.

Our faculty members embrace innovation and entrepreneurial thinking in their research. Learn more about our entrepreneurial research, the Raymond von Dran Innovation and Disruptive Entrepreneurship Accelerator (IDEA) and the Syracuse Student Sandbox.

## Hinds Hall-Academic Facilities

Hinds Hall, located on the Main Campus Quad, is the home of the School of Information Studies. This four-story, 48,000 square-foot building showcases the latest in technology and design, including collaborative work rooms, state-of-theart classrooms, research centers, and a student lounge with a cafe that features coffee, pastries and sandwiches.

Equipped with high-performance wireless networking, the facility supports virtual collaborations with global partners and includes an enhanced computer laboratory infrastructure with four main labs:

The iLab-Accommodating up to 40 students, this is the signature computer lab, featuring dual display screens for increased productivity in a variety of computer applications.
iTELL (Information Technology Experiential Learning Lab)-Students get handson experience working with the latest telecommunications equipment on their own servers and networking devices in the iTELL Data Center.
iSysLab (Information Systems Lab)-Dedicated to the iSchool's more technical classes, this lab features a variety of hardware and software for students to use.

Innovation Studio-This multi-purpose, highly reconfigurable 1,000 -square-foot space is modeled after an artist's studio to promote collaboration, idea generation, and rapid prototype development for student and faculty teams. A video studio with editing bays is attached.

The ICE Box, a space for innovation, collaboration, and entrepreneurship, is a newly renovated iSchool work area in Hinds Hall. Built during the summer of 2013, the space has become a model for blending creative design and technology within a community environment. The ICE Box is a merging of physical space for co-working and hosting events, and resources hub supporting and connecting entrepreneurship opportunities both on- and off-campus. Originally designed to allow for the spontaneous expression of creativity, the ICE Box has become a place where students collaborate on innovative products and services, meet with faculty and professionals, mentor each other on the nuances of their classes and
even complete their homework. The space has been built with the new economy in mind and the understanding that the best ideas flourish when conversations include diverse parties from multiple colleges.

The School of Information Studies' home in Hinds Hall received a 2008 American Institute of Architects Central New York Chapter Citation Award for the redesign and renovations conducted by Ashley McGraw Architects of Syracuse.

## Undergraduate Education

Syracuse University School of Information Studies (iSchool) undergraduates are innovative, problemsolvers who enjoy interacting with people as well as exploring new information technologies such as iPhones, iPads, wireless networks, and computers as well as social media tools like Facebook, YouTube, Foursquare, blogs, and Twitter.
The iSchool offers the undergraduate Information Management and Technology, BS, which combines technology, business, and communications courses to educate $21^{\text {st }}$ century professionals who can enter virtually any industry upon graduation.
The iSchool also offers the undergraduate Systems and Information Science, BS, a shared program with the College of Engineering and Computer Science.
Our flexible curriculum allows you to pursue a broad array of intellectual areas while providing a core knowledge of the technical, organizational, and communication skills necessary to succeed in our networked society. You can craft your education to fit your individual interests, and we offer dual degree programs with SU's Martin J. Whitman School of Management and S.I. Newhouse School of Public Communications.

Students often combine their iSchool education with another passion such as art and design, journalism, sports management, marketing, political science, or a foreign language. The small-school atmosphere provides individualized attention to each student while the larger Syracuse University community offers a rich array of additional resources.

The curriculum encourages entrepreneurship and out-of-the-box thinking while teaching students the organizational and communication skills necessary to thrive in the corporate and professional work environment.
Our students benefit from the school's consistent updates to the technology and creative spaces in Hinds Hall, centrally located on the Quad in Hinds Hall. The sophisticated facility has collaborative learning centers with the latest technology and equipment, and informal spaces for students to
mingle and study. A recent renovation includes the ICE Box area on the second floor, dedicated as a space for innovation, collaboration, and entrepreneurship. This area features flexible seating, private meeting rooms, whiteboard walls, and large tables to support collaborative learning. Our internationally prominent faculty members interact with students in small classes, research projects, and supervised internships.

Students from other schools and colleges at SU often enroll in one of the iSchool's three minors:
Global Enterprise Technology Minor: Teaches students to develop and manage complex, large-scale operating systems used by major companies around the world.
Information Management and Technology Minor: Provides knowledge of information technology and related information and communication problems that makes students more marketable, no matter their career.
Information Technology, Design, and Startups Minor: Provides basic knowledge and skills required to run a successful business including how to develop and refine new ideas -- the seeds of innovation -- and turn those ideas into a viable venture.

## Accreditation

Syracuse University is fully accredited by the Middle States Commission on Higher Education (MSCHE) and all programs are registered with the New York State Education Department. The MSCHE is a voluntary, non-governmental, membership association that has been dedicated to quality assurance and improvement through accreditation via peer evaluation, since 1919.
The Master of Science in Library and Information Science within Syracuse University's School of Information Studies (iSchool) is accredited by the American Library Association. ALA accreditation indicates that the program has undergone a self-evaluation process, been reviewed by peers, and meets the standards established by the American Library Association and Committee on Accreditation.

The iSchool is also a registered Project Management Institute Education Provider, meaning that the school's curriculum meets an international standard of best practice in the field of project management.

## iSchools Organization

We are a founding member of the iSchools Organization an educational organization consisting of deans from 65 leading information schools across the globe who have joined together to build awareness of, support for, and involvement with the information field.

The organization holds a yearly gathering, the iConference, to provide a forum in which information scholars, researchers and professionals share their insights on critical information issues in contemporary society.

## Major

Information Management and Technology, BS

## Contact:

Deborah Nosky, Program Director, 222 Hinds Hall, 315-443-1864, dlnosky@syr.edu

## Website:

B.S. in Information Management \& Technology

## Introduction:

The School of Information Studies offers a bachelor of science degree (B.S.) in Information Management and Technology. This degree program provides a broad introduction to information management, services, and technologies, coupled with a firm foundation in the arts and sciences. Students learn the most effective ways to find information, assess people's needs, and design and manage systems that meet those needs.
Coursework in Information Management and Technology teaches students how to locate and acquire information resources; select, manage, and use information technology; and help organizations use information resources to work more efficiently and more effectively. The overarching emphasis is on the usefulness of these information systems to people. Therefore, the program is balanced with management, communications, and liberal arts courses.

## Admission:

Students may be admitted into the B.S. in Information Management and Technology program in the first year.

For students transferring into the B.S. degree program from another university, a grade point average of at least 3.0 is required.

Internal transfer students are routinely admitted to the BS in IM\&T program with a GPA of 3.2 or higher. Please visit the Student Services Suite in Hinds 114 for an application and dates and times for the next iSchool information sessions.

## Dual Enrollment:

A formal dual program of study is available in cooperation with the Martin J. Whitman School of

Management and with the S.I. Newhouse School of Public Communications. A student may apply directly to the dual programs as an incoming firstyear student or may add the dual, as a current student, after completion of the dual degree admission requirements.

Dually enrolled students must fulfill the degree requirements of both schools. Upon graduating, they receive a bachelor's degree (one diploma) conferred jointly by the two schools.

Information Studies/Management
Students who select a dual degree program of study with the Martin J. Whitman School of Management often seek a working knowledge of business with the technical training in information systems to set them apart from standard business school graduates. Job opportunities are plentiful and get more exciting as the advances in technology prepare businesses for competition in the global marketplace. Technology coupled with business is the ultimate preparation for the job market in the future. Students may combine the Information Management and Technology major with any of the Whitman majors: Accounting, Entrepreneurship and Emerging Enterprises, Finance, Management, Marketing Management, Retail Management, and Supply Chain Management.
The School of Information Studies is the home college. To complete the dual degree program with the Whitman School, students must complete a minimum of 142 credits for graduation.

Information Studies/Public Communications
Online news sites, e-newsletters, video downloads, and blogs are competing with traditional sources of information such as newspapers and magazines, other printed materials, television, and radio. New communications professionals understand the need to be savvy in emerging technologies, and many aspiring professionals enroll in the dual degree program in Information Management and Technology and one of the majors offered through the S.I. Newhouse School of Public Communications. Students may combine the Information Management and Technology degree major with any of the Newhouse majors, including Advertising; Broadcast and Digital Journalism; Graphic Design; Magazine; Newspaper and Digital Journalism; Photography; Public Relations; and Television, Radio, and Film. This 138-146 credit dual program of study prepares students to work in the information technology intense world of public communication. Newhouse is the home college.

## Overview:

The B.S. in Information Management and Technology teaches students to understand the value of information to society, organizations, and
individual professionals. Students are prepared to analyze the information needs of individuals and organizations and to design and manage information systems that meet specific needs.

Information is now recognized by many organizations as their most valuable resource. Information professionals are employed by a variety of organizations, including governments, health care facilities, research institutes, legal services, large and small retail industries, banks and investment companies, sports and entertainment industries, consulting firms, colleges and universities, and international agencies.

The study of information focuses on the use and users of information as much as upon the systems that manipulate it. Students must have a broad education in the sciences, social sciences, and humanities, as well as in the areas of information management and information technologies.
All students take an Information Management and Technology primary core of 24-25 credits, which includes basic courses in information technology, information-based organizations, and information management. Students select five additional Information Management and Technology courses from the following concentrations:
Information Security
Project Management
Network Management
Web Design and Management
Database Management
Digital Retail Strategies
Courses within the Information Management and Technology curriculum prepare students for a wide array of positions that:
Perform organizational information needs analysis and information planning

Formulate information and information technology policies and procedures
Conduct research and development in information technologies appropriate to support an organization's mission
Facilitate technology transfer between organizational units

Monitor and evaluate information resources, including information sources, services, and technologies

Coordinate information resources management across and outside an organization

Budget for and acquire information resources
Students may further focus on an area of interest by incorporating one or more concentrations into their coursework, thus enhancing their resumes and marketability.

As information specialists are in high demand in the marketplace, careers are not limited to specific disciplines or industries. Our graduates are highly sought for such positions as information security managers, information management consultants, web design and development managers, database developers, project managers, process managers, database designers and managers, systems and design analysts, network administrators and managers, technology evaluators, user training and support technicians, and many other roles.
Some students may prefer to continue their education after receiving the bachelor's degree in order to pursue a professional career in such fields as business, education, government, law, librarianship, or medicine. The B.S. degree is an excellent pre-professional degree in that it combines a broad liberal arts education with computer and information technology skills; information seeking, use, and presentation skills, and a conceptual understanding of information's role in the modern society and economy.

Students graduating with a major or minor from the iSchool can petition to waive up to 6 credits toward one of the school's master's degree programs, thereby reducing the number of credits needed to complete the graduate degree.

Information Management and Technology majors often complement their programs with a minor. A sample of minors include the following:

Accounting
Biology (especially for pre-med)
Chemistry (especially for pre-med)
Economics
Entrepreneurship and Emerging Enterprises
Finance
Management Studies
Marketing
Philosophy
Policy Studies
Public Communications
Sport Management

## Learning Outcomes:

The educational objectives of the undergraduate program in information management and technology are to enable graduates to do the following:

Maintain knowledge of the functional areas of information management and their application to a variety of organizational contexts.

Use critical thinking skills and creativity to understand the uses of information for solving complex problems.

Understand the uses of information technologies for solving human problems.

Accomplish goals through effective leadership and teamwork.

Understand the need for and use of information in relation to ethical, societal, regulatory, and technological issues.

Clearly and effectively communicate ideas in writing and orally.
Use relevant technologies appropriate to solve problems.

Recognize the need for and an ability to engage in lifelong learning.

## Curriculum:

To graduate, students must complete 120 credits and must maintain at least a 2.5 grade point average in the information management and technology core.

The 120 credits must be distributed as follows:
39-40 credits for the Information Management and Technology Major
24-25 credits in the Information Management \& Technology Primary Core

15 credits of Information Management \& Technology Electives
21-23 credits in Skills Electives
12 courses / 36 credits in Arts and Sciences Divisional Requirements

21-24 credits in General Electives
I. Information Management and Technology Major (39 to 40 credits)

## A. Information Management and Technology Primary Core (24 to 25 credits)

## Introductory Courses:

IST 101 - Freshman Forum (first-year students only) or
IST 200 - Selected Topics Transfer Student Forum (1 credit) (external transfer students only)

IST 195 - Information Technologies

## Technology Courses:

IST 233 - Introduction to Computer Networking
IST 346 - Information Technology Management and Administration

IST 359 - Introduction to Database Management Systems

## Management Courses:

IST 335 - Introduction to Information-Based Organizations
IST 352 - Information Analysis of Organizational Systems

IST 445 - Managing Information Systems Projects
IST 466 - Prof Issues/Info Mgmt \& Tech

## B. Information Management and Technology Electives ( 15 credits)

Students must complete five additional IST courses to fulfill their Information Management and Technology elective requirement. Any 3 credit IST course outside of the primary core may be taken to fulfill this requirement. GET courses may be counted by petition as Information Management and Technology electives if they are not already being counted toward the Global Enterprise Technology minor. IDS classes may be taken as General Electives.

As students define their professional interests, they may choose coursework to match their planned career paths. Therefore, it is recommended students use their Information Management and Technology electives to also complete up to two concentrations from the list below.

## Concentrations:

Information Security Management:

## Required:

IST 323 - Introduction to Information Security
Electives:
IST 400 - Selected Topics Database Security
IST 425 - Enterprise Risk Management
IST 452 - Advanced Computer Networking
IST 522 - Applied Information Security

## Project Management:

Required:
IST 325 - Information Management Consultation

## Electives:

IST 419 - Applied Economics for Information Managers

IST 425 - Enterprise Risk Management
IST 456 - Information Policies and Decision Making

## Network and Systems Management:

Required:

IST 452 - Advanced Computer Networking

## Electives:

IST 400 - Selected Topics Open Source OS and Applications

GET 434 - Global Computing Challenges
GET 239 - Enterprise Technologies
IST 448 - Enterprise Wireless Network Technologies

IST 453 - Telecommunications Regulations
Web Design and Management:

## Required:

IST 263 - Design and Management of Internet Services

Electives:
IST 323 - Introduction to Information Security
IST 449 - Human Computer Interaction
IST 479 - Electronic Commerce Technologies
IST 486 - Social Media in the Enterprise
IST 523 - Graphic Design for the Web
IST 553 - Information Architecture for Internet Services

## Database Management

Required:
IST 469 - Advanced Data Administration Concepts and Database Management

Electives:
IST 263 - Design and Management of Internet Services

IST 400 - Selected Topics Database Security
IST 432 - Enterprise Systems
GET 434 - Global Computing Challenges
IST 479 - Electronic Commerce Technologies
IST 553 - Information Architecture for Internet Services

Digital Retail Strategies (in partnership with Whitman School of Management):

Required:
IST 195 - Information Technologies
RMT 301 - Retailing Fundamentals
RMT 457 - Electronic Retailing and Marketing
RMT 407 - Retail Buying and Planning
Electives:
IST 263 - Design and Management of Internet

Services
IST 486 - Social Media in the Enterprise
IST 523 - Graphic Design for the Web

## II. Skills Electives (21-23 credits)

## A. Programming Skills (3 credits)

All students majoring in Information Management and Technology are required to complete one computer programming course from the list below:

IST 256 - Application Programming for Information Systems

CPS 196 - Introduction to Computer Programming
CPS 335 - JAVA programming for the Internet
Any approved programming course

## B. Communications Skills (12 credits)

Students must choose one course from each of the four requirements.

WRT 105 - Studio 1: Practices of Academic Writing or

WRT 109 - Studio 1: Practices of Academic Writing (Honors)

WRT 205 - Studio 2: Critical Research and Writing or

WRT 209 - Studio 2: Critical Research and Writing (Honors) or
another writing course with permission of advisor
IST 444 - Information Reporting and Presentation or

CRS 325 - Presentational Speaking
WRT 303 - Advanced Writing Studio: Research and Writing or

WRT 307 - Advanced Writing Studio: Professional Writing

## C. Mathematics or Language Skills (6-8 credits)

All Information Management and Technology majors are required to attain minimum competence in either a foreign language or mathematics. Students may satisfy this requirement by completing either the quantitative skills or the language skills requirement of the Liberal Arts Core curriculum of the College of Arts and Sciences.
III. Arts and Sciences Divisional

Requirements (12 courses; minimum 36 credits)

More than one-third of the courses required for completing the Information Management and Technology major are taken in the College of Arts and Sciences. The three divisions of the Arts and Sciences-Natural Sciences and Mathematics, Social Sciences, and Humanities-play a central role in the information management and technology curriculum. Students are required to take three courses in each of the three divisions. In addition, three courses in any of the divisions must be completed to fulfill this requirement.

## IV. General Electives (21-24 credits)

Students can take any Syracuse University course open to them or concentrate on a minor, a dual degree, a combined degree, an internship experience, or study abroad.

## V. International Experience

Students will be required to complete one international experience to graduate with their iSchool undergraduate degree. This international experience is intended to expose students to how business is accomplished in other countries, as well as how to integrate business and information exchange between these countries, and work within multi-national teams. Students can fulfill their international requirement in one of the following ways:

Semester abroad
University exchange
Short term abroad program
International internship
Course work ( 6 credits from an approved list)
Coursework
Approved international component - by petition
Systems and Information
Science, BS
Systems and Information Science

## Program Directors:

David Dischiave, 225 Hinds Hall, 315-443-4681, ddischia@syr.edu

Robert J. Irwin, 4-206L-A Center for Science and Technology, 315-443-4400, rjirwin@syr.edu

## Faculty:

Thomas Barnard, Howard A. Blair, Tomislav Bujanovic, Stephen J. Chapin, Biao Chen, C.Y. Roger Chen, Shiu-Kai Chin, Jun Hwan (Brandon)

Choi, Wenliang (Kevin) Du, Sara Eftekharnejad, Ehat Ercanli, Makan Fardad, James W. Fawcett, Prasanta Ghosh, Jennifer Graham, Mustafa Cenk Gursoy, Robert Irwin, Can Isik, Andrew ChungYeung Lee, Jay Kyoon Lee, Yingbin Liang, Duane L. Marcy, Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Susan Older, Vir Phoha, Qinru Qiu, James S. Royer, Jeffrey Saltz, Tapan K. Sarkar, Fred Schlereth, Q. Wang Song, Sucheta Soundarajan, Jian Tang, Yuzhe (Richard) Tang, William C. Tetley, Pramod K. Varshney, Senem Velipasalar, Li Wang, Hong Wang, Yanzhi Wang, Heng Yin, Edmund Yu, Reza Zafarani

## What is Systems and Information Science?

In essence, students in the SIS program learn what they can do with computers and how best to do it. As the name implies, the focus is on information and how it can be stored, manipulated and retrieved. Implementation of large-scale software systems and working with a group of people in achieving such goals are emphasized in the SIS program.

## SIS at Syracuse University

Systems and Information Science (SIS) integrates software and systems knowledge with expertise in business enterprise environment. SIS majors gain hands-on experience in design-oriented laboratories and learn about the social, business and organizational aspects of digital information systems.

## Curriculum:

The SIS program requires a total of 120 credits, as follows:

32 credits SIS Core
24 credits SIS Sequences
13 credits Mathematical Foundations
9 credits Communication Skills
39 credits Arts \& Sciences
3 credits Free Electives
In the descriptions that follow, all courses are three credits unless otherwise indicated.

## I. SIS Core (32 Credits)

SIS 101 - SIS Freshman Forum
Information Management Core (9 credits)

IST 335 - Introduction to Information-Based

Organizations
IST 352 - Information Analysis of Organizational Systems
IST 445 - Managing Information Systems Projects
Computing Core (20 credits)
ECS 102 - Introduction to Computing
CIS 252 - Introduction to Computer Science
CIS 351 - Data Structures
CIS 386 - Principles of Computer System Design
CIS 453 - Software Specification and Design
CIS 454 - Software Implementation
II. Mathematical Foundations (13 credits)
MAT 194 - Precalculus
PHI 251 - Logic
CIS 375 - Introduction to Discrete Mathematics
CIS 223 - Statistical Reasoning and Practice

## II. SIS Sequences ( 24 Credits)

All SIS students must complete both a Short Technical Sequence ( 6 credits) and a Focus Area (18 credits).

The Technical Sequence requires a two-course sequence in one of several applied-technology areas: Database Management, Networking, Security Management, Systems, and Web Design and Management.
The Focus Area requires 18 credits in a specific domain, which represents a potential area for the application of a student's informating management and computing skills.
Students may not count the same course towards both their Technical Sequence and their Focus Area.
For details of the Technical Sequence and the Focus Areas, please consult the SIS Program Directors.

## IV. Communication Skills (9 credits)

The Communication Skills requirement provides both writing and presentation experience.
WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
And one of the following:
CRS 325 - Presentational Speaking
IST 444 - Information Reporting and Presentation

## V. Arts \& Sciences (39 credits)

Students must take 39 credits of courses from the College of Arts \& Sciences and/or the College of Visual and Performing Arts. Specifically, these credits must be distributed as follows:

6 credits Humanities
6 credits Social Sciences
6 credits Natural Sciences \& Mathematics
21 credits of any courses from the above A\&S divisions or VPA

## Note:

NYS Department of Education requires half of the credits for a B.S. degree to be in the liberal arts and sciences. These 39 credits-combined with the Communication Skills and Mathematical Foundations- exceed the necessary 60 credits.
A student's Focus Area (e.g., a minor in history) may contain courses that satisfy the NYS requirement for liberal-arts content. In such a case, the remaining credits become free electives.

## VI. Free Electives (3 credits)

A student has 3 credits of free electives. Any course in the University can be used to satisfy this requirement.

## Sample Four-Year Course Flow:

The following shows a fairly typical SIS undergraduate program for a student who arrives with no transfer credits. All courses are 3 credits unless otherwise indicated.

## First Year

## Fall Semester

SIS 101 - SIS Freshman Forum
ECS 102 - Introduction to Computing
MAT 194 - Precalculus
WRT 105 - Studio 1: Practices of Academic Writing

A\&S Elective
Total credits: 16

## Spring Semester

CIS 252 - Introduction to Computer Science
PHI 251 - Logic
A\&S Elective
A\&S Elective
A\&S elective
Total credits: 16

## Second Year

Fall Semester
CIS 375 - Introduction to Discrete Mathematics
CIS 351 - Data Structures
IST 335 - Introduction to Information-Based Organizations
A\&S elective
free elective
Total credits: 16
Spring Semester
CIS 223
WRT 205 - Studio 2: Critical Research and Writing
IST 352 - Information Analysis of Organizational Systems

Focus Area course
A\&S elective
Total credits: 15

## Third Year

## Fall Semester

CIS 386 - Principles of Computer System Design
IST 445 - Managing Information Systems Projects
Short Technical Sequence course
Focus Area course
A\&S elective
Total credits: 15

## Spring Semester

CRS 325 - Presentational Speaking or
IST 444 - Information Reporting and Presentation
Short Technical Sequence course
Focus Area course
A\&S elective
A\&S elective
Total credits: 15

## Fourth Year

## Fall Semester

CIS 453 - Software Specification and Design

## Focus Area course

Focus Area course

## A\&S elective

A\&S elective

Total credits: 15
Spring Semester
CIS 454 - Software Implementation
Focus Area course
A\&S elective
A\&S elective
Total credits: 12

## Minor

## Global Enterprise Technology Minor

## Contact:

David Dischiave, Program Director, 225 Hinds Hall, (315) 443-2911, ddischia@syr.edu

## Website:

Global Enterprise Technology

## Overview:

The 18-credit interdisciplinary minor in Global Enterprise Technology (GET) will prepare students from any undergraduate major to understand how one develops and manages global enterprise information systems, such as those used by the banking, insurance, medical, and retail industries. The minor is flexible enough so that students from finance and technology majors can add to their current knowledge, and students from nontechnical backgrounds, including the humanities, can develop foundational knowledge to pursue careers in industries with large-scale systems. Since these systems are central to most global companies, gaining an understanding of how enterprise systems are developed is useful to students entering the workforce across many careers - including finance, business strategy and technology focused careers.

## Admission:

Applicants must have a grade point average of at least 3.0. Depending on available spaces, students with GPA's below 3.0 may be considered, however, there may be times when GPA requirements will be higher than 3.0 due to space restrictions.

Students considering the minor may delay enrolling until the third year of study, but are encouraged to meet with an Information Studies Advisor during the first or second year.
The 18 -credit minor program in Global Enterprise Technology can be taken with any SU major, with
the approval of the student's home college.

## Curriculum:

## I. Primary Core (6 credits required) <br> GET 234 - Effective Collaboration in a Globally Distributed Environment <br> GET 239 - Enterprise Technologies <br> GET 236 - Enterprise Data Analysis: Tools and Techniques

## II. Secondary Core (6 credits required)

GET 302 - Global Financial Systems Architecture
GET 305 - Globalization, Culture and Information Technology
GET 336 - Advanced Enterprise Data Analysis: Tools and Techniques
GET 365 - Business Value of Information Technology

GET 375 - Management of Information Technology Contracting

## III. General Electives and

Specializations (6 credits required)

## Data Management

IST 352 - Information Analysis of Organizational Systems
IST 359 - Introduction to Database Management Systems

IST 469 - Advanced Data Administration Concepts and Database Management

## Enterprise Application Development

GET 433 - Multi-tier Application Development
CIS 453 - Software Specification and Design
CIS 454 - Software Implementation

## Technology Infrastructure

GET 235 - Leveraging Emerging Technologies
GET 434 - Global Computing Challenges
GET XXX - Any (1.5) credit course, not previously counted

## General Electives

(Any GET special topics courses can count toward General Electives)
GET 486 - Independent Technology Education
GET 487 - Global Tech
GET 471 - Internship in Global Enterprise Technology

## GET Minor Requirements

For students participating in the GET Immersion Experience program, the following course plan will meet the GET Minor requirements:

## I. Primary Core ( 6 credits required) <br> GET 234 - Effective Collaboration in a Globally Distributed Environment <br> GET 239 - Enterprise Technologies

GET 236 - Enterprise Data Analysis: Tools and Techniques

## II. Immersion Experience ( 9 credits required)

GET 410 - Contemporary Issues in Global Enterprise Technology (GET): (9 credits, required)

GET 472 - Professional Experience in Global Enterprise Technology (3 credits, optional)
III. Electives (optional, 3 credits if needed to reach 18 credits)
GET 302 - Global Financial Systems Architecture
GET 305 - Globalization, Culture and Information Technology
GET 336 - Advanced Enterprise Data Analysis: Tools and Techniques

GET 365 - Business Value of Information Technology

GET 375 - Management of Information Technology Contracting
GET 486 - Independent Technology Education
GET 487 - Global Tech
Information Management and Technology Minor

## Contact:

Deborah Nosky, Program Director, 322 Hinds Hall; (315) 443-1864 dlnosky@syr.edu

## Website:

Minor in Information Management \& Technology

## Overview:

The 18-credit minor program in Information Management and Technology can be taken with any SU major with the approval of the student's home college. The minor complements many majors because all organizations need people who understand information resources and information technology. Students who minor in

Information Management and Technology will increase their employability in a variety of careers.

Science and research majors who want to work in a research lab will be more employable if they can use online information systems to retrieve information and manage data, such as genome sequences.
Retailing and business students will be better prepared to work in business if they have skills in microcomputer applications and office systems technology.

Communications students must be able to research information, present and package it effectively in video, audio, and print form. An information management and technology minor will provide those skills.

Arts and Science majors with courses in information systems and information policy will find many opportunities to work in federal, state, and local government.

Health and Human Services majors who minor in Information Management and Technology will be better prepared to work in the automated, information-intensive environment of the health care industry.
Visual and art majors will learn how information technology gives them new tools by which to enhance the world.

## Admissions:

Students considering the minor may delay enrolling until their third year of study. However, interested students are encouraged to begin planning with a School of Information Studies Advisor during the first or second year. Students are required to fill out a brief application form. Applicants must have a grade point average of at least 3.0. Depending upon available spaces, students with GPAs below 3.0 may be considered. However, there may be times when GPA requirements will be higher than 3.0 due to space restrictions. Students must also meet other criteria as determined by the faculty of the School of Information Studies.

## Curriculum:

## I. Required Courses (9 credits)

IST 195 - Information Technologies
One course from each of the following areas:

## Technology Courses

IST 233 - Introduction to Computer Networking
IST 346 - Information Technology Management and Administration

IST 359 - Introduction to Database Management Systems

IST 256 - Application Programming for Information Systems or
IST 263 - Design and Management of Internet Services
(may be accepted by petition to fulfill the Technology course requirement)

## Management Courses

IST 335 - Introduction to Information-Based Organizations
IST 352 - Information Analysis of Organizational Systems

IST 445 - Managing Information Systems Projects

## II. Electives (9 credits)

Select three other information management and technology courses, preferably from one or more of the information management and technology concentrations. A minimum of 12 credits of coursework MUST be at the 300+ level.

## Information Technology, Design, and Startups Minor

## Contact:

Deborah Nosky, Program Director, 222 Hinds Hall, (315) 443-1864, dlnosky@syr.edu

## Website:

Minor in Information Technology, Design, and Startups

## Overview:

Do you have a dream of starting a new company? The minor in Information Technology, Design, and Startups (IDS) is a great way of converting that dream into reality. In IDS courses, you will acquire the basic knowledge and skills required to run a successful business and you will also learn how to develop and refine new ideas -- the seeds of innovation -- and turn those ideas into a viable venture. You can earn credit through real-world entrepreneurial immersion experiences, allowing you to pursue your venture while earning your Bachelor's degree. You will get support from talented faculty members who approach entrepreneurship from multi-disciplinary perspective as well as a team of community partners and mentors who can help you make the right connections to jumpstart your venture.

The minor in Information Technology, Design, and Startups is an interdisciplinary 18 -credit minor that prepares students with the knowledge and
skills required to start a technology-oriented business venture. Students learn the basics of business and entrepreneurship by taking EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises, taught by faculty from the Whitman School of Management, home to one of the most highly ranked entrepreneurship programs in the country. In IDS 401 - What's the Big Idea?: Technology Innovation, students are exposed to many aspects of the creative entrepreneurial process, focusing on the development and refinement of ideas that can be translated into a business venture. Students are also exposed to principles and practice of design that are critical to the development of new products and services. After successfully completing IDS 401, students are eligible to formally apply for the IDS minor, at which point they will enroll in IDS 402 Idea2Startup. In IDS 402, students work in teams to translate ideas into viable startup businesses, addressing all of the key components of that process from business proposal development to funding. To complete the IDS minor, students must fulfill the entrepreneurial experience requirement under the supervision of a faculty member and a suitable professional mentor. Students will typically fulfill the experience requirement by spending one or more semesters working at the Syracuse Technology Garden, a local incubator of technology-oriented businesses. At the Tech Garden, students will work at the Student Sandbox under the direction of an Entrepreneur in Residence and with support from volunteer mentors.

Required courses make up between 10 and 15 credits required for the minor, depending on how many credits a student chooses to earn during their entrepreneurial experience. The remaining 3-8 credits are taken as electives, drawn from a long list of options available from four different SU schools and colleges. Of the total of 18 credits required to earn the minor, 12 credits must be in courses numbered 300 or higher. In addition, no more than 3 elective credits can be double counted to fulfill requirements of another major or minor on campus.

The IDS minor is administered by the School of Information Studies. There are no requirements for admission other than registration for IDS 402. Registration for IDS 402 requires a student to submit a venture proposal to the course instructor.

## Curriculum:

## I. Required courses (10 credits)

Students will normally enroll in IDS 401 during the fall semester. Upon successful completion, they will apply for the minor and enroll in IDS 402 during the spring semester. Students are encouraged to take EEE 370 prior to or concurrent with IDS 401. After completing these three
courses, students will be eligible to apply for the Sandbox.

EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

IDS 401 - What's the Big Idea?: Technology Innovation

IDS 402 - Idea2Startup
IDS 403 - Startup Sandbox

## II. Recommended Electives (3-8 credits)

Students are encouraged to consult with the program director or a faculty or professional mentor to determine which of the following courses best complement their entrepreneurial goals.
IDS 403 - Startup Sandbox
Entrepreneurship and Emerging Enterprises, Martin J Whitman School
of Management
EEE 382 - Entrepreneurial Marketing
EEE 451 - Finance for Emerging Enterprises
EEE 458 - Business Plan Laboratory
Information Management and Technology, School of Information Studies

IST 195 - Information Technologies
IST 256 - Application Programming for Information Systems

IST 263 - Design and Management of Internet Services

IST 444 - Information Reporting and Presentation
IST 445 - Managing Information Systems Projects
IST 479 - Electronic Commerce Technologies
Design Department, College of Visual and Performing Arts
FAS 147 - Visual Thinking
DES 248 - Design Issues
EDI 144 - Drafting for Designers
EDI 251 - Environmental Design I
ISD 553 - Interior Design: Philosophy and Research

IND 477 - Industrial Design: Primary and Secondary Research

IND 375 - Human Factors For Designers
College of Engineering and Computer Science

CEN 574 - Process Design
CSE 486 - Design of Operating Systems
MEE 332 - Introduction to Machine Design and Manufacturing
MFE 331 - Manufacturing Processes
ECS 392 - Ethical Aspects of Engineering and Computer Science

MAE 548 - Engineering Economics and Technology Valuation

MFE 557 - Management Decisions in Manufacturing

MFE 453 - Production Planning and Control
ELE 458 - Data Networks: Basic Principles

## Global Enterprise Technology

## GET 234 - Effective Collaboration in a Globally Distributed Environment

## School of Information Studies

1.5 credit(s) At least $1 x$ fall or spring

Key technologies that facilitate collaboration in a global enterprise. Best practices for virtual and cross-cultural enterprise. Best practices for virtual and cross-cultural collaboration. Strategies for synchronous and asynchronous collaboration. Challenges of team building in a distributed environment.

## GET 235 - Leveraging Emerging Technologies

## School of Information Studies

1.5 credit(s) At least 1 x fall or spring Explore emerging technologies on a global scale and in the context of services familiar to students. Infrastructure, data centers, programming languages, security, privacy, mobile applications, and payment systems.

## GET 236 - Enterprise Data Analysis: Tools and Techniques

## School of Information Studies

1.5 credit(s) Every semester

Enterprise tools and techniques using modern data analysis tools. Review of spreadsheet fundamentals, formulas, graphing, sensitivity analysis, statistical correlation and regression. Intended for undergraduates interested in managing and analyzing enterprise data with contemporary software.

## GET 239 - Enterprise Technologies

## School of Information Studies

3 credit(s) At least 1x fall or spring
Coverage of technical architecture and management issues that comprise enterprise computing environments. Focus on identifying and solving large complex problems and using large
scale computing systems to deploy enterprise solutions. Hands-on development using enterprise technologies.

## GET 302 - Global Financial Systems Architecture

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Structures of real-world information systems in the money supply chain. Emphasis on largescale banking organizations and their challenges in moving and processing millions of complex transactions worldwide for all types of customers.

## GET 305 - Globalization, Culture and Information Technology

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Exploration of IT and culture in global enterprises including issues of globalization, IT and culture, distributed collaboration, global enterprise systems, knowledge management, and campaigns.

## GET 336 - Advanced Enterprise Data Analysis: Tools and Techniques

## School of Information Studies

1.5 credit(s) Every semester Advanced examination of enterprise tools and techniques using modern data analysis tools. Review of database queries, data slicing with pivot tables, and dash board development.

## GET 365 - Business Value of Information Technology

## School of Information Studies

1.5 credit(s) At least 1x fall or spring Crosslisted with: MIS 365 Financial measures of IT value including TCO, ROI, and NPV; non-financial dimensions of business value such as strategic fit, IT investment risk; IT governance and IT models; measuring IT performance; IT change management.

## GET 375 - Management of Information Technology Contracting

## School of Information Studies

1.5 credit(s) At least 1 x fall or spring Crosslisted with: MIS 375
Budgeting and controlling IT costs; IT procurement including requirements specification, requests for proposals, evaluation criteria, and vendor selection; evaluating and managing vendor performance; developing and monitoring contracts.

## GET 400 - Selected Topics

## School of Information Studies

1-6 credit(s) Upon sufficient interest

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## GET 410 - Contemporary Issues in Global Enterprise Technology (GET):

School of Information Studies
9 credit(s) At least 1x fall or spring Covers contemporary issues pervasive in large global enterprises. Builds the basic understanding of the technical and management architectures that comprise large, complex global enterprise computing environments.

## GET 433 - Multi-tier Application

 Development
## School of Information Studies

3 credit(s) At least 1x fall or spring The development of enterprise applications on multi-tiered systems from mobile to mainframe. Examines enterprise computing at two levels: Application Design Patterns and Infrastructure and Implementation.

GET 434 - Global Computing Challenges

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Management and technical overview of largescale computing challenges and their impact on global enterprise operations. The concepts, fundamentals, issues and technologies for managing high performance computing operations. Laboratory exercises.

## GET 471 - Internship in Global Enterprise Technology <br> School of Information Studies

1-12 credit(s) At least $1 x$ fall or spring Fully supervised internship available to Global Enterprise Technology minors. Students must complete contract with a site supervisor. Repeatable

## GET 472 - Professional Experience in Global Enterprise Technology

School of Information Studies
1-12 credit(s) At least $1 x$ fall or spring
Fully supervised extended professional experience in a global enterprise. Students must complete contract with site supervisor.
Repeatable, 12 credits maximum

## GET 486 - Independent Technology Education

School of Information Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: GET 686

Self-Directed Learning that provides the opportunity and resources to develop specific, individualized information technology knowledge and skills. Additional work required of graduate students.

## GET 487 - Global Tech

## School of Information Studies

3 credit(s) At least 1x fall or spring
Double Numbered with: GET 687
2 week traveling seminar to different countries in Europe, visiting globlal organizations exploring key enterprise technology topics from a global perspective. Additional work required of graduate students.

## GET 490 - Independent Study

## School of Information Studies

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## GET 500 - Selected Topics

## School of Information Studies

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## Information Technology, Design and Startup

## IDS 401 - What's the Big Idea?: <br> Technology Innovation

## School of Information Studies

3 credit(s)
Innovation in information technology. Learn how to develop, grow and vet ideas and build teams ready to create a product, service or business.

## IDS 402 - Idea2Startup

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Students establish an actionable plan for the launch of their own business. Focus on establishing a well conceived, achievable and actionable path to market. Permission of instructor.
PREREQ: IDS 401

## IDS 403 - Startup Sandbox

## School of Information Studies

1-6 credit(s) At least $1 x$ fall or spring
Business incubation. Students work with mentors
and coaches to develop and deploy a for-profit or nonprofit venture. Permission of instructor.
PREREQ: IDS 402
Repeatable 14 time(s), 12 credits maximum

## Information Studies

## IST 101 - Freshman Forum

School of Information Studies
1 credit(s) At least $1 x$ fall or spring The field of information management and technology. Diverse topics include new and emerging issues in the field. Relevant reading and writing with discussions prompted by current issues in the news.

## IST 180 - International Course

## School of Information Studies

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable 2 time(s), 12 credits maximum

## IST 195 - Information Technologies

## School of Information Studies

3 credit(s) Every semester
State-of-the-art technologies in the field.
Computer architectures, telecommunication networks, software design and application. Issues in information management and technology use.

## IST 200 - Selected Topics

## School of Information Studies

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## IST 233 - Introduction to Computer Networking

## School of Information Studies

3 credit(s) Every semester Overview of technology, standards, implementation and management of digital computer networks. Wired and wireless local and wide area networks, Internet protocols, telecommunications, and network security. Includes weekly labs.

## IST 256 - Application Programming for Information Systems

## School of Information Studies

3 credit(s) Every semester
Structured program design, development testing,
implementation, and documentation of common information system applications using structured programming languages. Lectures and laboratory.

## IST 263 - Design and Management of Internet Services

## School of Information Studies

3 credit(s) At least 1x fall or spring Principles for construction and publication of multimedia documents for the World Wide Web. Incorporate a user-based approach to planning, design, implementation, and management in distributed network environments.

## IST 280 - International Course

## School of Information Studies

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## IST 300 - Selected Topics

## School of Information Studies

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## IST 323 - Introduction to Information Security

## School of Information Studies

3 credit(s) At least 1x fall or spring
Basic concepts and technologies of information security. Students who successfully complete this course will have a comprehensive overview of information security with some hands-on experience.
PREREQ: IST 233

## IST 325 - Information Management Consultation

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Information technology trends and proven applications in information processing, telecommunications, office systems, and information processing industry products and services. Consultation skills; strategies for introducing technology transfer strategies and management of innovation and change.

## IST 335 - Introduction to InformationBased Organizations

## School of Information Studies

3 credit(s) Every semester
Organizational behavior; groups and teams; leadership and management; human resources; organizational development; change management. Interactions between people and technology in work organizations; impacts of information technology on organizational effectiveness.

## IST 341 - User-Based Design

## School of Information Studies

3 credit(s) Irregularly
System design based on users' cognitive perceptions of their situations, their work in addressing their situations, information needs, information and source use. Contrast to technology, content or organization focused design strategies. Based on students' system design interests.

## IST 346 - Information Technology Management and Administration

## School of Information Studies

3 credit(s) Every semester
Information technology management principles and practices. Administration of computers, operating systems, and applications. Tools and techniques for managing information technology operations. Includes hand-on labs. PREREQ: IST 233

## IST 352 - Information Analysis of Organizational Systems

## School of Information Studies

3 credit(s) Every semester Introduces information flow as basis of organizational work and role of information systems in managing work. Concept of systems decomposition to facilitate analysis. Skills required to decompose, model, and analyze information systems.

## IST 359 - Introduction to Database Management Systems

## School of Information Studies

3 credit(s) Every semester
Data structure, file organization, and principles and concepts of data bases for information retrieval systems. Data analysis, design, models, management, evaluation, and implementation. PREREQ: IST 352

## IST 371 - Career Development Skills for Information Professions

## School of Information Studies

1 credit(s) Irregularly
Self assessment, resume writing, cover letter
writing, professionalism in the workplace, job searching techniques, developing an internship or cooperative learning agreement.

## IST 400 - Selected Topics

## School of Information Studies

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## IST 402 - Digital Forensics

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring The fundamentals of the forensic process, evidence handling, and quality assurance as they apply to digital forensics. Emphasis on evidence handling and quality assurance as they apply to digital forensics.
PREREQ: IST 323

## IST 419 - Applied Economics for Information Managers

## School of Information Studies

3 credit(s) At least 1 x fall or spring Economic principles relevant to management of information functions in organizational contexts. Core micro-economic concepts applied to the marketplace for information products and services. Financial tools used for managing information systems and networks.

## IST 422 - Acquiring, Procuring, and Financing Information Technology

## School of Information Studies

3 credit(s) Upon sufficient interest
Preparing and negotiating information technology requests, cost-benefit analysis, and budget alternatives. Financing options for information processing and telecommunications projects, preparing requests for proposals or other procurement alternatives, negotiating with vendors, acquisition strategies.

## IST 425 - Enterprise Risk Management

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring
A multidisciplinary perspective of risk assessment, modeling, and management. Topics include: concepts of personal accountability versus governance and policy; how organizations define and measure risk and loss; and plan for contingencies.

## IST 426 - Business Information Sources and Strategic Intelligence

## School of Information Studies

3 credit(s) Upon sufficient interest Business and industry information sources.

Techniques and processes of competitor analysis. Concentrates on the implications of the information provided through competitor analysis and on making recommendations for strategic action plans. Group projects and case studies.

## IST 429-Organizational Information

 Security
## School of Information Studies

3 credit(s) Upon sufficient interest Personnel/organizational skills for information security managers and officers: staffing, training, certification, incentives, and evaluation of information security personnel, non-security IT personnel, etc.; organizational development related to security awareness, threats, and responses; and ethics/codes of behavior in information security.
PREREQ: IST 323

## IST 432 - Enterprise Systems

## School of Information Studies

3 credit(s) Upon sufficient interest
Technical overview of Enterprise Systems and their impact on organizations. The concepts, fundamentals, issues and technologies in planning, implementing and operating an Enterprise System. Current trends, issues, technologies and extensions. Laboratory exercises.

## IST 442 - Introduction to Electronic Commerce

## School of Information Studies

3 credit(s) Upon sufficient interest Organizational, technical, and societal forces driving the movement to digital commerce. Business to consumers and business to business interactions. Effects of e-commerce on industry value chains, markets, transaction costs, business alliances, and industrial competitiveness.

## IST 443 - Critique of the Information Age

## School of Information Studies

3 credit(s) At least 1x fall or spring
Effects of information technologies on society: social, cultural, and ethical implications.
Multidisciplinary critique of changes in society.

## IST 444 - Information Reporting and Presentation

## School of Information Studies

3 credit(s) Every semester
Information synthesis and the presentation of information. Organizing information for presentation, text, and graphics. Presentation skills, training and teaching methods.

## IST 445 - Managing Information Systems Projects

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Double Numbered with: IST 645
Project management as a professional discipline in information and communication technology. Introduction to roles, activities, methods, and tools. Critical review and application of principles. Additional work required of graduate students.

## IST 447 - Complex issues in IT Project Management

## School of Information Studies

3 credit(s) At least 1x fall or spring Double Numbered with: IST 747
Complex issues that confront IT project managers. Case studies to explore problems, solutions and best practices. Application of key concepts to diverse industry settings. Additional work required of graduate students.
PREREQ: IST 445

## IST 448 - Enterprise Wireless Network Technologies

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: IST 648
Technologies, standards, implementation, and management of advanced broadband wireless data systems. Includes examination of analog and digital wireless subsystems, antennas, access devices, and enterprise infrastructure components. Technical presentations, discussion of industry activities, and labs. Additional work required of graduate students.
PREREQ: IST 233

## IST 449 - Human Computer Interaction

## School of Information Studies

3 credit(s) Upon sufficient interest Human performance characteristics, user computer interaction styles, user interface design alternatives, user interface evaluation methods.
PREREQ: IST 352

## IST 452 - Advanced Computer Networking

## School of Information Studies

3 credit(s) At least 1x fall or spring
Technical, design, and management issues related to enterprise computer networking. In-depth investigations of TCP/IP Internet work protocols and popular network technologies including Ethernet and Wireless. Hands-on experience with protocol analysis, network management, and security.
PREREQ: IST 233

## IST 453 - Telecommunications Regulations

## School of Information Studies

3 credit(s) At least 1x fall or spring Regulation at the ITU, FCC, and public utility commissions. Function and operation of regulatory bodies. Political, economic, and legal theories of regulation. Sources of regulatory information. Regulatory history and current status. Current issues.

## IST 456 - Information Policies and Decision Making

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Current and emerging policy issues, policy formulation and conflict, roles and perspectives of major actors in the policy-making process. Privacy, freedom of information, intellectual property rights, information dissemination and access, security classification and restriction, computer crime.

## IST 466 - Prof Issues/Info Mgmt \& Tech

## School of Information Studies

3 credit(s) Every semester
Integration of management strategies, information uses, and information technologies as related to professional conduct, ethics, and career strategies. In-depth review and use of case studies. IST majors only.

## IST 469 - Advanced Data Administration Concepts and Database Management

## School of Information Studies

3 credit(s) Upon sufficient interest In-depth analysis of databases and database management system architecture, building complex database objects, database applications using forms and reports, data warehouses, establishing and implementing database security, and tuning databases for optimum performance. PREREQ: IST 359

## IST 471 - Internship in Information Management and Technology

## School of Information Studies

1-6 credit(s) Every semester
Fully supervised internship available to IST majors and minors.
Repeatable 5 time(s), 12 credits maximum

## IST 472 - Cooperative Education in Information Management and Technology

School of Information Studies
1-12 credit(s) Every semester

Fully supervised, paid, cooperative education experience extending over two separate time periods. Students must complete a contract with site supervisor.
Repeatable 5 time(s), 12 credits maximum

## IST 479 - Electronic Commerce

 Technologies
## School of Information Studies

3 credit(s) At least 1x fall or spring Overview of e-commerce technologies and applications, middleware, firewalls, encryption, payment systems, database integration, shopping cart applications, cookies, transaction analysis, and application service providers. Programming experience recommended.
PREREQ: IST 323

## IST 486-Social Media in the Enterprise

## School of Information Studies

3 credit(s) At least 1x fall or spring Introduction to the use and management of social media technologies, including strategies for communication, awareness of challenges, and tools and techniques for analysis of social media in contemporary organizations.

## IST 488 - Social Web Technologies

## School of Information Studies

3 credit(s) At least 1x fall or spring Double Numbered with: IST 688
This course will educate students in the concepts and mechanisms of social networking in technologies through hands-on system design, development, implementation and management of these systems.
PREREQ: IST 256

## IST 490 - Independent Study

## School of Information Studies

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## IST 499 - Honors Capstone Project

## School of Information Studies

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## IST 500 - Selected Topics

## School of Information Studies

1-6 credit(s) Upon sufficient interest
Exploration of a topic (to be determined) not
covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## IST 502 - New Directions in Academic Libraries

## School of Information Studies

1-3 credit(s) Upon sufficient interest
Present state and future prospects of academic libraries in light of changes in the technology of scholarly communications and in the nature of higher education.

## IST 503 - Proposal Writing for the Information Field

## School of Information Studies

1 credit(s) Upon sufficient interest
Researching and developing grant and contract proposals. Proposal evaluation process and key tools for finding grants and requests for proposals in the information sciences. Emphasis on preparing successful proposal packets.

## IST 511 - Introduction to the Library and Information Profession

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring
Key components of the field and its relationship to other fields and professions. General structure, issues and problems, research, and literature.

## IST 522 - Applied Information Security

## School of Information Studies

3 credit(s) Upon sufficient interest
Applications of information security including hands-on experience. Students who successfully complete this course will understand how information security technology is applied to real systems.
PREREQ: IST 623 OR (IST 233 AND IST 346)

## IST 523 - Graphic Design for the Web

## School of Information Studies

3 credit(s) At least 1x fall or spring Learn basic and advanced website design principles utilizing Adobe Photoshop and Flash, with emphasis on typography, color theory and layout. Understand and practice Flash Actionscript basics to create animation and dynamic web applications.

## IST 553 - Information Architecture for Internet Services

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Building and management of Internet information services, including information organization, information management, and information dissemination. Understanding of the use of Internet technologies within an organizational
context. Practice with current technologies.

## IST 556 - Mobile Network Services

## School of Information Studies

3 credit(s) At least $1 x$ fall or spring Devices, networks, and applications of emerging mobile communication technologies. Includes mobile devices, wireless applications, mobility in the enterprise, and service provider strategies and positioning. Includes technical presentations and extensive discussion and analysis of industry trends.

## IST 558 - Technologies in Web Content Management

## School of Information Studies

3 credit(s) Upon sufficient interest Concepts and techniques in web content representation, organization, presentation, development, and management with the eXtensible Markup Language (XML), including basic XML syntax, vocabulary specification, data modeling, transformation, and Document Object Model (DOM).

## IST 564 - Library \& Information Services to Students with Disabilities

## School of Information Studies

3 credit(s) At least 1x fall or spring
Includes strategies for planning library programs and services that are inclusive of the information needs of PK-12th grade students with disabilities.

## IST 565 - Data Mining

## School of Information Studies

3 credit(s) Upon sufficient interest Introduction to data mining techniques, familiarity with particular real-world applications, challenges involved in these applications, and future directions of the field. Optional hands-on experience with commercially available software packages.

## IST 585 - Knowledge Management

## School of Information Studies

3 credit(s) Upon sufficient interest Information systems behaviors that enable organizations to systematically identify, acquire, store, analyze, distribute, and reuse information and knowledge from all sources (internal and external, explicit and tacit) in order to enhance organizational productivity and competitiveness.

# School of Information Studies Faculty 

Marilyn P. Arnoe, Associate Research Professor; Professor of Practice
Ph.D., Syracuse University, 1992

Children's curiosity and learning, information literacy, creativity

Bahram Attaie, Assistant Professor of Practice Computer Science, M.S.
Networking and database programming
Scott A. Bernard, Executive Professor
Ph.D., Virginia Tech., 2001
Enterprise architecture and capital planning, public and private sector chief information officers, federal policy development on information resources management

Susan M. Bonzi, Associate Professor; Faculty Emeritus
Ph.D., University of Illinois at Urbana-Champaign, 1983
Image retrieval systems, bibliometrics, linguistic applications in information retrieval

Carlos E E. Caicedo Bastidas, Assistant Professor Ph.D., University of Pittsburgh, 2009
Security, wireless networks, software development, telecommunications management

Kevin Crowston, Distinguished Professor of Information Science
Ph.D., Massachusetts Institute of Technology, 1991
Organizational implications of information technologies, electronic markets, computersupported cooperative work with electronic commerce, open source software development, virtual organizations
Michael D'Eredita, Assistant Professor of Practice Ph.D., Syracuse University, 1998
Organizational learning and change, skill acquisition, high performance (virtual) teams
Jason Dedrick, Associate Professor
Management, Ph.D.
Economic development, industrial policy,
technology diffusion, globalization of IT
David Dischiave, Director, Global Enterprise
Technology (GET) and Bachelor of Science in
Systems and Information Science (SIS); Associate Professor of Practice
M.S., Regis University, 2003

Experiential learning in the classroom, process and data modeling techniques, object-oriented software engineering principles and database management systems

Susan Dischiave, Director, Bachelor of Science in Information Management and Technology; Associate Professor of Practice
M.S., Regis University, 2003

Experiential learning in the classroom, process and data modeling techniques, object-oriented software engineering principles and database management systems

Paul B. Gandel, Director, Doctorate of Professional Studies - Information Management; Professor Ph.D., Syracuse, 1986
Management of information systems, library
administration and services, software engineering, information policy, and visualization of information
Martha A. Garcia-Murillo, Professor
Ph.D., University of Southern California, 1998
Policy, regulation, telecommunications, infrastructure, access
Robert Heckman, Associate Professor
Ph.D., University of Pittsburgh, 1993
Emergent leadership in virtual teams, distance
learning, teaching and learning strategies for information professionals
Renee F. Hill, Assistant Professor
Ph.D., Florida State University, 2006
School media specialist preparation, censorship in public and private schools, library history, increasing the level of participation of underrepresented ethnic groups in library and information science education
Yun Huang, Research Assistant Professor
Jill Hurst-Wahl, Director, MS in Library \& Information Science and School Media programs;
Associate Professor of Practice
M.L.S., University of Maryland, 1983

Library science, information technology, entrepreneurship, business intelligence, digitization
Michelle L. Kaarst-Brown, Associate Professor Ph.D., York University, 1995
Strategic management of IT, assessment of strategic risks and opportunities of information and communication technologies, social implications of IT
Bruce R. Kingma, Professor of Entrepreneurship Ph.D., University of Rochester, 1989
Economics of information, digital library economics, cost-benefit analysis
Barbara Kwasnik, Associate Dean for Academic Affairs, Professor
Ph.D., Rutgers University, 1989
Classification theory, research methods for classification, genre, naming, knowledge organization
R. David Lankes, Professor

Ph.D., Syracuse University, 1999
Digital libraries for education, digital reference, metadata, education information
Kenneth Lavender, Assistant Professor of Practice Ph.D., University of California at Santa Barbara, 1972
Rare books, preservation, digital reference, preservation of information, and digital reference services

Elizabeth D. Liddy, Dean and Trustee Professor Ph.D., Syracuse University, 1988
Natural Language Processing (NLP), crosslanguage retrieval, data mining, text mining, automatic metadata generation, health informatics

Ian MacInnes, Associate Professor
Ph.D., University of Southern California, 1998 Information industry strategy, electronic commerce compatibility standards, international business, convergence, telecommunications

Nancy McCracken, Research Associate Professor Ph.D., Syracuse University, 1979
Natural language processing, information extraction, question answering, knowledge representation, and machine learning
Lee W. McKnight, Associate Professor Ph.D., Massachusetts Institute of Technology, 1989
Wireless grids, nomadicity, convergence of the Internet and telecommunications industries, Internet economics and policy, national and international technology policy

David Molta, Associate Professor of Practice M.P.A., University of North Texas, 1982 Mobile and wireless information systems, technology education, network systems design and management
Paul Morarescu, Assistant Professor
Milton L. Mueller, Professor
Ph.D., University of Pennsylvania, 1989
Telecommunications industry liberalization, Internet governance, domain names and trademarks, broadband regulation, globalization and trade in telecom and audiovisual services, telephone numbering resources, international institutions governing communication and information

Scott R. Nicholson, Associate Professor
Ph.D., University of North Texas, 2000
Data warehousing, data mining, bibliomining process, web search tools, new methods for distance education
Michael S. Nilan, Associate Professor Ph.D., University of Washington
Virtual communities, user-based system design, cognitive behavior, information seeking and use, knowledge management, intranets as collaborative virtual environments, functional linguistic structures for data organizations

Deborah Nosky, Assistant Professor of Practice
Megan Oakleaf, Director of Instructional Design; Assistant Professor
Ph.D., University of North Carolina-Chapel Hill, 2006
Evolution and assessment of information services; theories, methods, and assessment of user education; information literacy frameworks and instruction; information services in academic libraries

Carsten S. Oesterlund, Associate Professor Ph.D., Massachusetts Institute of Technology, 2002
Distributed and virtual work, organizational learning and knowledge, IT use and organizational
boundaries, document and genre analysis, computer-supported collaborative work
Joon S. Park, Associate Professor Ph.D., George Mason University, 1999 Information and systems security; security policies, models, mechanisms, evaluation, survivability, and applications
Jian Qin, Professor
Ph.D., University of Illinois at Urbana-Champaign, 1996
Representation of learning objects, knowledge organization structure, organization of distributed information, knowledge discovery in bibliographic databases, scientific communication
Jeffrey H. Rubin, Associate Professor of Practice M.S., Syracuse University, 1997

Content/knowledge management systems, webbased management tools (including log analysis), user behavior on the Internet

Steven B. Sawyer, Associate Dean for Research; Director, Phd Program; Professor
D.B.A., Boston University, 1995

Social informatics, design and development of information systems, project management, role of information and communication technologies relative to organizational and social change
Carl Schramm, University Professor
Ruth V. Small, Meredith Professor
Ph.D., Syracuse University, 1986
Motivation, information literacy, distance learning
Marcene Sonneborn, Assistant Professor of Practice

Jeffrey M. Stanton, Senior Associate Dean, Professor
Ph.D., University of Connecticut, 1997
Impacts of organizational behavior on information security, cognitive-affective models of motivation, evaluation and behavior, organizational and societal impacts of engineering, science and technology, research methods including psychometrics and statistics

Barbara Stripling, Assistant Professor of Practice
Jennifer Stromer-Galley, Associate Professor
Zixiang (Alex) Tan, Associate Professor Ph.D., Rutgers University, 1996 Applications and implications of technology, telecommunications, governmental policy and regulations, wireless networking
Arthur Thomas, Director: MS in Information Management, MS in Telecommunications \& Network Management; Associate Professor of Practice
Ph.D., SUNY Buffalo, 1990
Performance improvement, project management, data networking engineering, instructional design, information systems management

Howard Turtle, Research Associate Professor;

## Professor of Practice

Ph.D., University of Massachusetts, Amherst, 1991 Design and implementation of retrieval systems, operating system support for large databases, text representation techniques, automatic classification, text and data mining, automated inference techniques
Murali Venkatesh, Associate Professor Ph.D., Indiana University, 1991 Broadband community network planning, reflective practice, planning and design of technological systems, applications for communities

Jun Wang, Research Assistant Professor Ph.D., University of Illinois, Urbana-Champaign, 2006; Ph.D., Chinese Academy of Sciences, 1997 Socially intelligent computing, social tagging, visualization of statistical data
Yang Wang, Assistant Professor
Ozgur Yilmazel, Research Assistant Professor Ph.D., Syracuse University, 2006
Natural language processing, software development, information access, information retrieval, text categorization

Bei Yu, Assistant Professor
Ph.D., University of Illinois, Urbana-Champaign Text mining, opinion mining, media mining, political opinion and ideology

## Ping Zhang, Professor

Ph.D., University of Texas at Austin, 1995
Broad issues in human-computer interaction; individual responses to IT ; affective, cognitive, and behavior aspects of human interaction with technology; user-centered information systems design and evaluation; business information visualization; technology-assisted education

# Martin J. Whitman School of Management 

Ken Kavajecz, Dean<br>721 University Avenue Suite 415<br>whitman.syr.edu

## About the School

Welcome to the Whitman School of Management, a top-ranked business school with a diverse faculty and strong focus on leadership building and community engagement. At the Whitman School, students develop a strong business sense across all aspects of management, providing them with the skills, opportunities, and motivation necessary to compete in a global environment.

The Whitman School is a state-of-the-art business school in both programming and facility, reflecting both Syracuse University's commitment and history of innovative business education and the Whitman School's role as a cutting-edge, experiential learning environment. The Whitman School continues to expand its technological resources to provide services exclusive to our students, in the form of equipment loans, device repair services (including warranty repairs for Dell and Apple computers), discounted printing, discounted and/or free software, remote access to specially licensed software, and lab environments that are updated regularly to reflect the technology that supports the Whitman curriculum. In addition, Whitman is a certified Certiport/Microsoft testing facility and encourages its students to become Microsoft Office Specialist: Excel Certified. Students enrolled at Whitman get the best of both worlds, enjoying the intimate and interconnected community of the Whitman School with all the resources and opportunities of a world-class research university.
The Whitman School of Management continues to be ranked among the nation's top business programs. U.S. News and World Report ranked both Whitman's undergraduate and graduate programs among the best in the nation. The Whitman part-time MBA program, the iMBA, was identified among the top AACSB-accredited online graduate programs by the U.S. News and by the Financial Times. Whitman's entrepreneurship program has been ranked nationwide by the United States Association for Small Business and Entrepreneurship; Entrepreneur Magazine/The Princeton Review; Fortune Small Business; and U.S. News \& World Report. Many of Whitman's specialty programs have been highly ranked by Bloomberg BusinessWeek, including accounting, corporate strategy, entrepreneurship, operations management, sustainability, business law, marketing management, and ethics.

## Accreditation Information

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Educational Mission

The Whitman School of Management is dedicated to:

Fostering a diverse, supportive learning community focused on developing entrepreneurial managers who will become leaders in an era of global competitiveness and technological advancements;
Advancing the theory and practice of management by discovering and disseminating relevant knowledge and contributing perspectives on frontline business issues;
Providing students and faculty select educational experiences that promote intellectual engagement, personal and professional growth, and lifelong scholarship.

## Undergraduate Education

The Martin J. Whitman School of Management offers nine programs leading to the B.S. degree. They are in accounting, entrepreneurship and emerging enterprises, finance, general management studies, management, marketing management, real estate, retailing, and supply chain management. Each of these programs can be completed within four years. The school also offers dual programs with information studies and public communications.

Each student is assigned an advisor for the first two years of his or her program. Students select a major any time before the end of the second semester of the sophomore year and are then assigned a major advisor, who helps them choose specific courses in the major as well as management electives.

## General Regulations

For academic rules and regulations that apply to all University students, see the Academic Rules section of this catalog. This annual publication also contains special regulations that apply to all students matriculated in the Whitman School.

The students, instructional staff, and administrators of the Whitman School recognize that honesty, integrity, and respect for others are fundamental expectations in the academic and business communities. The Whitman School follows the Syracuse University Academic Integrity Policy and Procedures.

Additionally, all students who take courses in the Whitman School are required to certify in writing that they have read, understand, and agree to comply with this policy.

# Whitman Bachelor of Science Degree Requirements 

The B.S. degree, in any of the 9 areas available, requires at least 122 credits, distributed as indicated below. In addition, all students must complete global diversity, community engagement, and internship requirements before graduating.

## Quantitative Skills

MAT 284 - Business Calculus *
MAS 261 - Introductory Statistics for Management
Science electives (astronomy, biology, chemistry, earth science, physics, or any physical science) 3 credits

BUA 345 - Business Analytics

## Total Credits: 13

## Communication Skills

WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing WRT 307 - Advanced Writing Studio: Professional Writing

Total Credits: 9
Required Arts \& Sciences Courses
ECN 203 - Economic Ideas and Issues ECN 300+-300- or 400-level economics elective (recommended ECN 303 - Micro for Business)
PSY 205 - Foundations of Human Behavior

## Total Credits: 9

## Arts \& Science

 Electives27 credits taken through any subject offered by the College of Arts \& Sciences

## Total Credits: 27

## Introductory Core

In addition to management coursework taken within other skills areas, students are required to complete the following coursework in the management core:
SOM 122 - Perspectives of Business and Management (fall only)

LPP 255 - Introduction to the Legal System
ACC 151 - Introduction to Financial Accounting
ACC 252 - Intro to Managerial Acc

# Integrated Core 1 (fall only) 

FIN 256 - Corporation Finance
MAR 255 - Principles of Marketing
SCM 265 - Introduction to Supply Chain Management

## Integrated Core 2 (spring only)

MGT 247 - Introduction to Strategic Management
MGT 248 - Principles of Management
SOM 354 - Managing in a Global Setting

## Senior Capstone

EEE 457 - Strategic and Entrepreneurial Management

## Total Credits: 31

## Major Field Specialization

All students, except those majoring in CPA accounting, take 15 credits in the major area beyond core requirements. Students must contact an academic advisor in the chosen major field to discuss specific requirements.

## Total Credits: 15

## Business Elective

A business elective is any upper-division course in the Whitman School that gives credit but is not used to fill requirements in other groups. This course cannot be from the student's major area.

## Total Credits: 3

## Free Electives

Students complete additional credits from any credit-bearing course with the following conditions: no more than 3 credits of physical education, health, or music ensemble may be used; and students may not take courses considered to have content that duplicates courses already taken.

## Total Credits: 12

## Global Diversity

Whitman students must have some form of global experience. For many students, this is achieved through study abroad. Students may also fulfill the requirement with the completion of two courses from the Global Diversity Electives list (which may fulfill other course requirements for the degree).

## Community Engagement

Students are required to apply their management skills and knowledge to community problems. This is realized through a Community Service Learning Agreement in which 75 hours are completed throughout the undergraduate experience.

## Internship

Students must have at least one experience, after they acquire junior standing, consisting of substantive and supervised work that complements their academic program (120 internship hour). This is accomplished through completing a course that requires internship participation, an independent study for experience credit with a professor, or an Internship Learning Agreement.

## Grading Policy

The faculty at the Whitman School developed a uniform grading policy for the undergraduate program. The policy has three goals: (1) to ensure that grading is fair and consistent across courses, (2) to encourage students to take their coursework seriously, and (3) to ensure faculty deliver a challenging academic experience.

The policy is as follows: For all undergraduate courses taken at the Whitman School with 15 or more students enrolled, the mean grade shall be no higher than 3.3 and the maximum percentage of $\mathrm{A} / \mathrm{A}$ - is $33 \%$.

Multiple sections taught by the same professor will be aggregated together to calculate the mean grade and percentage of $\mathrm{A} / \mathrm{A}$ - awarded. Deviations to the above policy may occur depending on individual class performance.

## Other Programs and Services

## Dual Programs

The Whitman School, in cooperation with other schools and colleges within the University, offers dual programs that make it possible for students to pursue two programs of study concurrently. Students in these programs are assigned an advisor in each college.

Students enrolled in dual programs fulfill degree requirements in each school and receive one degree (one diploma) jointly conferred by both schools. Dual programs require more than 123 credits, normally required for graduation, but can often be completed within four years. The Whitman School offers dual programs with the School of Information Studies and the S.I. Newhouse School of Public Communications. The Whitman/Newhouse dual degree program requires a minimum of 151 credits. The Information Studies/Whitman dual degree program requires a minimum of 142 credits.

Further information about dual programs can be obtained from the Office of Undergraduate Programs, Whitman Suite 215.

## Study Abroad

The Whitman School, in cooperation with Syracuse University Abroad (SU Abroad), offers students the opportunity to participate in a program of study abroad in London, England; Santiago, Chile; Madrid, Spain; Strasbourg, France; Florence, Italy; Istanbul, Turkey; Hong Kong, China; or Beijing, China during the fall or spring semester. Management courses and internships are generally offered in a variety of areas. In addition, students may choose from a variety of courses in arts and sciences and public communications.

During the summer, students may participate in management internship programs in South Africa, Madrid, London, Dublin, or Singapore; take courses in international business in Shanghai; or participate in a travelling seminar that studies globalization in Italy, Switzerland, France, Germany, Holland, Belgium, and England.

SU Abroad also sponsors study opportunities in a variety of locations throughout the world, such as Ireland, Japan, Australia, East/Central Europe, Germany, Russia, and South Korea. Although no management courses are available in some of these programs, students in these programs can satisfy other degree requirements while developing sensitivity to cultural differences.
It is essential that students planning to study abroad contact the Office of Undergraduate Programs, 215 School of Management Building, during their freshman or sophomore year.

For further information about study abroad, contact SU Abroad, 106 Walnut Place.

## Intra-University Transfer

Syracuse University students interested in an intra-University transfer into the Whitman School must meet the intra-University transfer requirements. To be considered eligible for transfer, students must have completed at least 30 credits at Syracuse University (two academic semesters), including two of the following or their equivalents: MAT 221, MAT 284, and ECN 203. These students are admitted as space becomes available and considered based on the following criteria: cumulative GPA, rigor of academic coursework taken at SU, engagement on and off campus, and an optional professor recommendation. Whitman only admits students for the fall semester - admissions decisions are made over the summer. Students interested in transferring are required to attend an Information Session and meet with an advisor in the Whitman School's Office of Undergraduate Programs. All application requirements must be completed by the last day of the semester of their freshmen year, no summer coursework will be considered. Decisions will be made by a committee over the summer and communicated to all applicants.

## Transfer Credit into the Whitman Program

The Whitman School limits the total number of credits that can be accepted after matriculation into the Whitman School. Once a student matriculates into Whitman, only 12 additional credits can be taken outside Syracuse University (with prior approval by an academic advisor) and transferred back to count towards degree requirements. Additionally, all transfer coursework must be taken through a US domestic institution. Coursework taken through an International Institution will not be accepted after matriculation into the Whitman Program.

## Minors Available to Management Students

Students in the Whitman School are encouraged to pursue a minor offered by other schools or colleges, and should seek assistance from their academic advisor in choosing a minor that will enhance their academic program. With careful and early planning, many minors can fit into the undergraduate curriculum without a need for extra coursework. While management students are allowed to pursue most minors offered outside the Whitman School, provided that they have the appropriate prerequisites, they most often choose a minor in economics, global enterprise technology, information management and technology, political science, psychology, public communication studies, or a foreign language.

# Minors in Management 

Minor Coordinator: Rachel DuBois
215 Whitman School of Management
$315-443-2361$
315-443-2361
The Whitman School offers several minors, allowing students to pursue either general management studies or a more specialized program that provides in-depth study in one area of management. A minor in management can help students learn about subjects that contribute to success in business, not-for-profit, and government organizations. Knowledge in management is seen as beneficial by many prospective employers.

The minors in Whitman are available to matriculated undergraduate students from all Syracuse University schools and colleges other than the Whitman School, provided that they have the permission of their home school or college, a cumulative grade-point average (GPA) of at least 3.0 at the time of application, and a minimum of four semesters to complete the requirements. 3.0 is the minimum GPA required for the minor, however decisions are made on a space available basis. A student may declare a minor in: Accounting, Entrepreneurship and Emerging Enterprises, Finance, Management Studies Minor, International Business, Marketing, Real Estate, Retail Management, and Strategic Management. The details of each of the minor programs can be found under Academic Offerings.

There are two deadlines for submitting applications for management minors: November 1 and April 1 of each academic year. Due to course sequencing and enrollment limitations, students must have a minimum four semesters to complete the minor requirements. Any student wishing to apply for a management minor after the spring of the sophomore year must have one or more courses completed or in progress (please see an advisor in the Whitman Undergraduate Office for more information).

## To Declare a Minor in Management

Check with your home school or college office to make sure you have room in your program for the required courses. Also check that you have a cumulative GPA of at least 3.0.

Pick up a minor declaration form in SOM Suite 215 (keep in mind the April 1 and November 1 deadlines).

Bring the minor declaration form to SOM Suite 215 before the deadline. If you are approved, you will be notified via e-mail and asked to pick up the form.

Take the signed form to your home school or college office. They will approve the declaration
and give you instructions about how to get the minor officially posted on your SU record.

## Transferring Courses into Minors in Management

All 18 credits must be taken through Syracuse University for a letter grade. No transfer credit will be considered for the Management minor.

Programs
Major
Accounting, BS
Entrepreneurship and Emerging Enterprises, BS
Finance, BS
General Management Studies, BS
Management, BS
Marketing Management, BS
Real Estate, BS
Retail Management, BS
Supply Chain Management, BS
Minor
Accounting Minor
Entrepreneurship and Emerging Enterprises Minor Finance Minor
International Business Minor
Management Studies Minor
Marketing Minor
Real Estate Minor
Retail Management Minor
Strategic Management Minor

## Facilities

The Whitman School of Management's 160,000-square-foot sustainable building opened in 2005, with a central focus on students and creating an environment that promotes a culture of collegiality and a high-tech, world-class learning experience. To provide that experience, the Whitman School creates an open community atmosphere with advanced resources and teamoriented learning spaces, including:

## 22 classrooms

## 200-seat auditorium

20 team meeting rooms each for graduate and undergraduate students
three-story, 4000-square-foot Grand Hall undergraduate and graduate computer clusters
74 faculty offices
a faculty research center
an Investment Research Center
a center for entrepreneurial start-ups
a 100-seat cafe
a special-events room with outdoor terrace
The Whitman School of Management's building is dedicated to sustainability, providing environmentally friendly resources and features for an enhanced "green" experience.

## Research Centers \& Institutes

The Whitman School building boasts many spaces for innovative and collaborative research that provide experiential learning and prepare students for careers across a broad range of business areas. Sophisticated software and integrated technology coupled with advanced workshops and seminars create an ideal learning atmosphere. Whitman's diverse research centers and institutes include:

## Africa Business Program

The Ballentine Investment Institute
The George E. Bennett Center for Tax Research
The Robert H. Brethen Operations Management Institute

The Michael J. Falcone Center for Entrepreneurship
The H. H. Franklin Center for Supply Chain Management

Goodman Leadership Center
The Olivia and Walter Kiebach Center for International Business Studies

The James D. Kuhn Real Estate Center
The Harry E. Salzberg Memorial Program
The Earl V. Snyder Innovation Management Center
Sustainable Enterprise Partnership
Transactional Records Access Clearinghouse (TRAC)

## Major

## Accounting, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty

Susan Albring, Kofi Appiah Okyere, Joseph Comprix, Randal Elder,, David Harris, Lihong Liang, MaryAnn Monforte, Craig Nichols, John Petosa, Alex Thevaranjan, Ginger Wagner, William J. Walsh, Joyce Zadzilka

The major programs in accounting provide students with the academic training and experience needed to become professional accountants. Job opportunities include careers in public accounting, business and industry, not-for-profit organizations, and government. The professional program is designed for students who plan to enter public accounting or other professional accounting fields. The managerial program is appropriate for individuals who plan to enter other areas of accounting or to complement other programs of study.

## Major Requirements

## Professional Program

The professional program is designed to help students meet New York State educational requirements for CPA licensure. The CPA license is granted after passing the Uniform CPA examination and meeting professional experience requirements. After August 1, 2009, New York State will require 150 hours of education for CPA licensure. Most other states currently require 150 hours of education for CPA licensure. Students seeking CPA licensure and planning to sit for the Uniform CPA Examination should meet with an advisor to discuss the education requirements for the state in which they seek licensure.
The professional program requires the following courses (credit hours in parentheses):

## Junior Year

ACC 356 - Intermediate Financial Accounting I
ACC 357 - Intermediate Financial Accounting II
ACC 363 - Cost Analysis \& Control
ACC 385 - Principles of Taxation

## Senior Year

ACC 476 - Auditing Theory/Practice
ACC 477 - Advanced Financial Accounting
LPP 457 - Law of Commercial Transactions

## Managerial Program

The managerial program requires the courses listed below. All managerial accounting majors are required to take ACC 356. Students then choose either ACC 357 or ACC 363, depending upon whether their primary interest is financial or management accounting. Remaining accounting and management electives are chosen based on career objectives in consultation with a major advisor.
The managerial program requires the following courses (credit hours in parentheses):

ACC 356 - Intermediate Financial Accounting I
ACC 357 - Intermediate Financial Accounting II

ACC 363 - Cost Analysis \& Control
Accounting electives (6)
Business electives (3)

## Entrepreneurship and Emerging Enterprises, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty

Alejandro Amexcua, J. Michael Haynie, Alexandra Kostakis, G. Thomas Lumpkin, Alexander McKelvie, Maria Minniti, Todd Moss, Minet Schindehutte, John Torrens, William J. Walsh, Johan Wiklund, Trent Williams
The major theme of the Martin J. Whitman School of Management is entrepreneurial management. Entrepreneurial management is defined as the ability to envision and create new business ventures whether in a startup situation or within a mature organization; the ability to identify new opportunities; and the ability to grow and renew existing businesses (including nonprofit organizations) in a healthy, productive manner. Entrepreneurs and entrepreneurial managers must deal with numerous challenges and opportunities including managing proficiently in rapidly growing global markets. These exciting challenges require new ways of thinking, creating, and managing. They also require personal courage and risk-taking.

The Entrepreneurship and Emerging Enterprises Program (EEE) is designed to link educational excellence and entrepreneurial ingenuity. Topics covered in the curriculum include the entrepreneurial mind, opportunity identification and verification, financing, venture planning, managing family and closely held enterprises, venture capital, startup challenges, legal issues facing entrepreneurs, creating an entrepreneurial culture, and building highly proficient entrepreneurial teams. Students frequently benefit from the expertise of local and national leaders in the field.

Graduates of the EEE program are particularly well-suited for the growing opportunities found in both small and large organizations requiring entrepreneurial skills. A primary educational mission of the EEE program is to help students recognize and capitalize on their own entrepreneurial potential.

## Major Requirements

Students majoring in entrepreneurship and emerging enterprises must take the following courses (credits in parentheses):

## UNDERGRADUATE COURSE CATALOG

## Sophomore or Junior Year

EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

## Junior and Senior Year

Major electives (12)
Business electives (3)
Major electives are chosen from the following:

EEE 375 - Entrepreneurial Family Business Management

EEE 378 - Imagination, Entrepreneurship and Creative Problem Solving

EEE 382 - Entrepreneurial Marketing
EEE 400 - Selected Topics in Entrepreneurship
EEE 420 - Corporate Entrepreneurship
EEE 439 - Entrepreneurship and Digital Commerce

EEE 440 - Social Entrepreneurship in Action
EEE 442 - Emerging Enterprise Law
EEE 443 - Emerging Enterprise Consulting
EEE 444 - Dilemmas and Debates in Entrepreneurship
EEE 446 - Minority and Woman's
Entrepreneurship: Race, Gender, and
Entrepreneurial Opportunity
EEE 451 - Finance for Emerging Enterprises
EEE 464 - Entrepreneurial Empowerment
MAR 444 - New Product Management

## Additional Information

Note: Students are eligible to apply for D'Aniello Entrepreneurial Internships (EEE 490), which may be taken for up to 3 credits.

Note: A major in Entrepreneurship and Emerging Enterprises requires 15 credits of EEE courses and 3 credits of a business elective. The senior capstone course, EEE 457, does not count as part of the EEE major.

## Finance, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty

Amber Anand, Tom Barkley, Markus Broman, Anna Chernobai, Fernando Diz, Kenneth A. Kavajecz, Roger Koppl, Peter E. Koveos, Milena Petrova,

James Seward, Ravi Shukla, A. Joseph Warburton, David Weinbaum, , Lai Xu, Pierre Yourougou

The study and understanding of finance is an integral component of decision-making in all areas and levels of management. Finance is a global, dynamic, and exciting discipline. It offers a unique blend of theory and practical applications. To prepare themselves for the study of finance, students should pay special attention to economics, accounting, and quantitative methods. The competitive nature of the field also necessitates a deep commitment and the appropriate work ethic. Since finance is a forwardlooking discipline, those wishing to pursue a finance career should be willing to function in a world full of challenges and uncertainty. Whether it entails working on Wall Street or for a multinational company in Shanghai, the profession offers opportunities that can be both intellectually and professionally rewarding.
Offerings include courses in financial management, investments, the security market, international finance, distress investing, portfolio management, financial engineering, and financial institutions.

## Major Requirements

In addition to the FIN 256 core requirement, students majoring in finance must take the following courses (credit hours in parentheses):

## Junior and Senior Year

FIN 345 - Financial Management
FIN 346 - Investments
FIN electives (9)
Business Elective (3)
Finance electives may be chosen from the following:
FIN 355 - Money \& Banking
FIN 378 - Financial Planning
FIN 400 - Selected Topics
FIN 453 - New and Emerging Markets
FIN 457 - Internatl Financial Manag
FIN 458 - Fin Instns/Portfolio Mgmt
FIN 459 - Introduction to Derivatives
FIN 461 - Financial Modeling
FIN 463 - Model Building for Investment Banking, Equity Research, and Credit Analysis

FIN 464 - Institutional Trading
FIN 465 - The Securities Market
FIN 466 - Value Investing
FIN 468 - Seminar in Finance

FIN 469 - Distress Investing
FIN 471 - Financial Instit \& Mkts
FIN 472 - Case Studies in Real Estate Investment and Finance

RES 443 - Real Estate Capital Markets or
RES 462 - Real Estate Finance and Investment
EEE 451 - Finance for Emerging Enterprises

## General Accounting, B.S.

## Contact

Office of Undergraduate Programs, 215 Whitman
School of Management, 315-443-2361

## Faculty

Susan Albring, Kofi Appiah Okyere, Joseph Comprix, Randal Elder, Mitchell Franklin, David Harris, Lihong Liang, MaryAnn Monforte, Alex Thevaranjan, Ginger Wagner, William J. Walsh, Joyce Zadzilka

## Description

The major programs in accounting provide students with the academic training and experience needed to become professional accountants. Job opportunities include careers in public accounting, business and industry, not-for-profit organizations, and government. The Accounting program is designed for students who plan to enter public accounting or other professional accounting fields. The General Accounting program is appropriate for individuals who plan to enter other areas of accounting or to complement other programs of study

## Major Requirements: 15 credits

## Junior and Senior Year

- ACC 356 - Intermediate Financial Accounting I
- ACC 357 - Intermediate Financial Accounting II
- ACC 363-Cost Analysis \& Control

Select two from the following courses:

- ACC 385 - Principles of Taxation
- ACC 476 - Auditing Theory/Practice

ACC 477 - Advanced Financial Accounting
General Management Studies, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty:

See "Faculty, Martin J. Whitman School of Management."

The program in general management studies is offered for students whose career goals require a broad knowledge of the functional areas of management rather than a specialization in a specific area. The program is designed primarily for students planning to enter a small business, where a specialization, such as in accounting or marketing, is not as appropriate an educational background as is extensive upper-division coursework in three or four functional areas.

## Major Requirements

Student works with an advisor to construct an 18-credit program in upper-division management coursework beyond the core requirements.

## Management, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty

Natarajan Balasubramanian, Pamela Brandes, , Donald Cardarelli, Ravi Dharwadkar, Yitzhak Fried, Dennis J. Gillen, Lisa Knych, Catherine Maritan, Kira Reed, Dan Rice, Lynne Vincent

The major in management prepares students for professional positions that involve both macro and micro organizational processes and systems in corporations and their environments. Many Whitman students desire to join management training programs at multi-national corporations or the professional consulting firms that serve these global corporations; and others will go on to law school or another professional school. The major in management will give students the content and the context to develop the skills and perspectives to become managers and leaders in their chosen organizations and professions. Students are often attracted to the major because of its focus on the specific theory and practice of managing people and organizations.

The management major serves as a logical complement to other technical majors at Whitman and across campus. The knowledge and practices developed in the required courses allow graduates to analyze and use all the organizational processes and resources necessary to manage
their positions and other employees. The diverse but focused interests of the department faculty provide the multiple foundations needed to develop the integrated sets of skills and perspectives to manage in today's corporations and their complex environments.

## Major Requirements

## Junior Year

MGT 346-Organizational Behavior
Business elective (3)

## Senior Year

MGT 447 - Advanced Topics in Strategic Management
MGT 462 - Leadership and Organization Change LPP 467 - Management and Ethics

Major elective (3)

## Marketing Management, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty

Amiya Basu, Linda M. Cushman, Scott Fay, Dinesh Gauri, E. Scott Lathrop, Eunkyu Lee, Tridib Mazumdar, Amanda G. Nicholson, S.P. Raj, Breagin Riley, Susan Smith, Clint B. Tankersley, Frances Gaither Tucker, Raymond M. Wimer

The marketing management program in the Whitman School is designed for students to encounter all the basic challenges in the industry: how a company decides what to sell, the customers and market to target, and the best means of reaching them. In many courses, students work in project teams-just as professionals do-to create strategies for product development, pricing, promotion, and distribution. Students learn to respond to the demands of competitors, the government, and larger social issues.

Marketing graduates are prepared for broad and promising career options, including advertising and promotion management, business-tobusiness marketing, consulting, marketing management, marketing research, new product development, product and brand management, retailing and wholesaling, and sales management.

## Major Requirements

In addition to the MAR 255 core requirement, students majoring in marketing must take the
following courses (credit hours in parentheses):

## Junior and Senior Year

MAR 356 - Marketing Research
Major electives (12)
Business elective (3)

## Note:

All marketing management majors are required to take MAR 356. Other major courses depend on career objectives and should be selected with the assistance of a major advisor. Management electives in the major area of specialization are identified for each marketing management student in consultation with a departmental advisor.

## Marketing major electives may be chosen from the following:

MAR 307 - Sales and Strategic Partnerships
MAR 357 - Consumer Behavior
MAR 400 - Selected Topics in Marketing
MAR 401 - Electronic Retailing and Marketing
MAR 407 - Sales Management in B2B Markets
MAR 444 - New Product Management
MAR 445 - Brand Management
MAR 455 - Marketing Communications *
MAR 456 - Global Marketing Strategy
SCM 401 - Supply Chain and Logistics Management or

RMT 301 - Retailing Fundamentals

## Real Estate, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman School of Management, 315-443-2361.

## Faculty

## Milena Petrova

The real estate major focuses on the management perspective of real estate and real life experiences. The major provides students with the skill set and knowledge required to excel in the increasingly competitive landscape of real estate industry. An understanding of real estate fundamentals, and the capacity to maintain this knowledge base in a changing commercial environment, is an emphasis of the program, as is the ability to critically examine real estate financial information from diverse and conflicting sources. Students graduate from the real estate program with an understanding of the economic
and environmental impact of real estate and seek positions in the expanding real estate job market throughout the world.

## Major Requirements

Students majoring in real estate must take the following courses (credit hours in parentheses):

Junior and Senior Year
RES 431 - Real Estate Principles
RES 462 - Real Estate Finance and Investment
RES 442 - Real Estate Development
RES electives (6)
Business Elective (3)
Real Estate electives may be chose from the following:

RES 400 - Selected Topics in Real Estate
RES 442 - Real Estate Development
RES 443 - Real Estate Capital Markets
RES 462 - Real Estate Finance and Investment

## Retail Management, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman
School of Management, 315-443-2361.

## Faculty

Linda M. Cushman, Amanda G. Nicholson, Raymond M. Wimer
Today's global marketplace demands skilled managers and leaders. The retail management program in the Whitman School prepares students for careers as buyers, store managers, apparel product developers, and sales and marketing representatives. The retail management faculty is committed to becoming an internationally recognized leader in providing the marketplace with well-educated, highly effective executives, advocates, and entrepreneurs. This major offers a student-centered approach to learning in partnership with national and international corporations and organizations. Through experienced faculty and visiting industry professionals, the program provides the basis of theoretical and practical knowledge that students need to succeed in the competitive and everchanging environment.

Students in our programs participate in a wide variety of coursework and activities that prepare them for success in the field. Among the many opportunities are the college's Martin and Phyllis Berman Lecture Series, which brings prominent

CEOs and entrepreneurs to campus to meet and address the student body, and a variety of supervised field trips that enable students to explore the current business environment. Students are encouraged to spend a semester abroad in one of our many Syracuse University centers, which also offer appropriate coursework for the discipline.

## Major Requirements

All retail management majors are required to take RMT 301, RMT 307, RMT 333*, and RMT 475*. Two other major courses, and management electives, depend on career objectives and should be selected with the assistance of a major advisor.

* Students must complete RMT 333 and RMT 475 for the major. These courses must be used as management electives or free electives as advised.


## Sophomore Year

RMT 301 - Retailing Fundamentals

## Junior and Senior Year

RMT 333 - Professional Practice
RMT 307 - Sales and Strategic Partnerships
RMT 407 - Retail Buying and Planning
RMT 475 - Supervised Internship
Major elective (3)
Business elective (3)

## Major elective may be chosen from the following: <br> RMT 314 - Product Development for Retail Management

RMT 357 - Visual Merchandising and Store Planning
RMT 457 - Electronic Retailing and Marketing

## Supply Chain Management, BS

## Contact:

Office of Undergraduate Programs, 215 Whitman
School of Management, 315-443-2361.

## Faculty

Karca Aral, Frederick Easton, Burak Kazaz, Gary LaPoint, Julie Niederhoff, Patrick Penfield, Frances Gaither Tucker, Zhengping Wu
A new kind of enterprise is emerging-the supply chain. A supply chain is a pipeline of information and materials, frequently global in scope. It includes not only the organization but also the suppliers, buyers, and others with whom it interacts.

Supply chain management requires a distinctive view of business: procurement, manufacturing, and distribution must be viewed and controlled as a seamless flow. Good supply chain managers eliminate delays and reduce the amount of resources tied up all along the chain. To perform effectively, a company must learn to function as a single organism, and people at every level must look beyond the old rules.

An understanding of supply chain management is an asset to any manager, and there is a strong demand for specialists who can comprehend and manage the entire chain. Building on longestablished strengths, the undergraduate major offers a solid grounding in this fast-evolving specialty.
Students have the opportunity to take APICS certification exams. Furthermore, by enrolling in a set group of courses, students will be eligible for the AST\&L blanket waiver for certification.

## Major Requirements

In addition to the SCM 265 core requirement, students majoring in supply chain management majors take SCM 401 and SCM 402. Students take two other major electives. The major courses depend on career objectives and should be selected with the assistance of a major advisor. Two management electives are also chosen in consultation with a departmental advisor. (Credit hours in parentheses.)

## Junior Year

SCM 401 - Supply Chain and Logistics Management
SCM 402 - Supply Chain Management Systems

## Senior Year

Major electives (9)
Business elective (3)

## Two major electives may be chosen

from the following:
SCM 400 - Selected Topics in Supply Chain Management
SCM 403 - Introduction to Management Science
SCM 421 - Fundamentals of Sourcing
SCM 431 - Transportation and Distribution Center Management

## SCM 455 - Lean Six Sigma

SCM 456 - Introduction to Project Management
SCM 459 - The Law of Global Business

## Minor

## Accounting Minor

## Minor Requirements

ACC 151 - Introduction to Financial Accounting
ACC 252 - Intro to Managerial Acc
FIN 301 - Essentials of Finance
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

Two 300-level or higher Accounting electives for which student has prerequisites

## Additional Information

For information on declaring a minor in Whitman, click here.

## Entrepreneurship and Emerging Enterprises Minor

Minor Requirements
ACC 201 - Essentials of Accounting
FIN 301 - Essentials of Finance
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

Three additional EEE courses, some of which have prerequisites

## Additional Information

For information on declaring a minor in Whitman, click here.

## Finance Minor

## Minor Requirements

ACC 151 - Introduction to Financial Accounting
ACC 252 - Intro to Managerial Acc
FIN 301 - Essentials of Finance
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

Two 300-level or higher FIN electives for which student has taken prerequisites.*

## Note:

*MAS 261/MAS 362 or MAT 221/MAT 222 are required for many FIN electives.

## Additional Information

For information on declaring a minor in Whitman, click here.

International Business Minor

## Minor Requirements

ACC 201 - Essentials of Accounting
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
FIN 301 - Essentials of Finance
SOM 354 - Managing in a Global Setting

## Additional Courses

Two additional courses, approved as international business electives. This includes EEE 452 , FIN 453 , FIN 457, any course with an INB prefix, and any approved course taken at one of the SU Abroad centers.

## Additional Information

For information on declaring a Whitman minor, click here.

Management Studies Minor

## Minor Requirements

ACC 201 - Essentials of Accounting
FIN 301 - Essentials of Finance
LPP 255 - Introduction to the Legal System
MGT 355 - Strategic Human Resource
Management
MAR 301 - Essentials of Marketing
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

## Additional Information

For information on declaring a Whitman minor, click here.

## Marketing Minor

## Minor Requirements

ACC 201 - Essentials of Accounting
FIN 301 - Essentials of Finance
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

MAR 301 - Essentials of Marketing
Two additional MAR courses, some of which have prerequisites, or other courses approved as marketing electives

## Additional Information

For information on declaring a minor in Whitman, click here.

## Real Estate Minor

## Minor Requirements

ACC 201 - Essentials of Accounting
FIN 301 - Essentials of Finance
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

RES 431 - Real Estate Principles
RES 442 - Real Estate Development or
RES 462 - Real Estate Finance and Investment
One additional RES elective for which student has prerequisites

## Additional Information

For information on declaring a minor in Whitman, click here.

## Retail Management Minor

Minor Requirements
ACC 201 - Essentials of Accounting
FIN 301 - Essentials of Finance
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
RMT 301 - Retailing Fundamentals
RMT 307 - Sales and Strategic Partnerships
One additional 3-credit RMT course
Total Credits: 18

## Additional Information

For information on declaring a minor in Whitman, click here.

## Strategic Management Minor

## Minor Requirements

ACC 201 - Essentials of Accounting
FIN 301 - Essentials of Finance
LPP 255 - Introduction to the Legal System
MGT 247 - Introduction to Strategic Management
EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
One 300- or 400-level MGT or LPP course for which the student has taken prerequisites or

SOM 354 - Managing in a Global Setting

## Additional Information

For information on declaring a minor in Whitman, click here.

UNDERGRADUATE COURSE CATALOG

## Combined Degree

Aerospace Engineering/ Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 128 credits for the Bachelor of Science in Aerospace Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Bioengineering/Business <br> Administration, BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 130 credits for the Bachelor of Science in Bioengineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

Chemical Engineering/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315,

315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 128 credits for the Bachelor of Science in Chemical Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and
summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Civil Engineering/Business

Administration (3-2 Program), BS/MBA

## Contact:

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records and Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 128 credits for the Bachelor of Science in Civil Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

Computer Engineering/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 129 credits for the Bachelor of Science in Computer Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework
Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Computer Science/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 124 credits for the Bachelor of Science in Computer Science degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their

GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

Electrical Engineering/Business Administration (3-2 Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 132 credits for the Bachelor of Science in Electrical Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Environmental Engineering/ Business Administration (3-2 Program), BS/MBA

## Contact:

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu

Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

Students will complete 129 credits for the Bachelor of Science in Environmental Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will
be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.

Year 1 \& 2: Enrollment in required undergraduate coursework
Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework
Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

## Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Mechanical Engineering/

Business Administration (3-2
Program), BS/MBA

## Contact

Whitman Graduate Programs Office, Suite 315, 315-443-4327, busgrad@syr.edu
Maria Marceau, Director of Student Records \& Study Abroad, College of Engineering \& Computer Science, 130 Link Hall, 315-443-5191, mcmarce@syr.edu

## Students will complete 128 credits for the Bachelor of Science in Mechanical Engineering degree and an additional 54 credits for the MBA degree.

## 3-2 Program

## Program Description

The joint B.S. Engineering/MBA program is designed to provide high-caliber students at Syracuse University with the opportunity to complete a bachelor's degree in the College of Engineering and Computer Science and an MBA degree in the Whitman School of Management in five years with minimal additional expense and time.

## Accreditation

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920.

## Admission

Students in the Engineering school will apply for the MBA program during their sophomore year. Students are required to take the GMAT as part of the application process. Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements.

## Degree Requirements

Students admitted to the MBA program will be awarded their B.S. in engineering degree concurrently with their MBA degree, as they will complete their B.S. and MBA requirements during their fifth year.

## 3+2 Program Requirements:

Students will complete 129 credits for the Computer Engineering degree and an additional 54 credits for the MBA degree.
Year 1 \& 2: Enrollment in required undergraduate coursework

Year 3: Enrollment in some MBA courses and summer MBA coursework, continued progress in undergraduate coursework

Year 4: Enrollment in some MBA courses and summer MBA internship, continued progress in undergraduate coursework

Year 5: Completion of BS and MBA coursework

## Transfer Credit

Students can transfer a maximum of 6 credits of elective coursework for the MBA degree. The credits must be graduate level taken from an AACSB accredited business school. A grade of "B" or higher is needed to transfer in the credits. The grade itself does not transfer.

Satisfactory Progress

Students are required to maintain a GPA of 3.0 or higher to meet degree requirements for the MBA.

## Other Programs

## Whitman Bachelor of Science Degree Requirements

The B.S. degree, in any of the 9 areas available, requires at least 122 credits, distributed as indicated below. In addition, all students must complete global diversity, community engagement, and internship requirements before graduating.

## Quantitative Skills

MAT 284 - Business Calculus *
MAS 261 - Introductory Statistics for Management
Science electives (astronomy, biology, chemistry, earth science, physics, or any physical science) 3 credits

BUA 345 - Business Analytics
Total Credits: 13
Communication Skills
WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
WRT 307 - Advanced Writing Studio: Professional Writing

Total Credits: 9

## Required Arts \& Sciences Courses

PSY 205 - Foundations of Human Behavior
ECN 203 - Economic Ideas and Issues
ECN 300+ - 300- or 400-level economics elective (recommended ECN 303 - Micro for Business)

Total Credits: 9

## Arts \& Science Electives

27 credits taken through any subject offered by the College of Arts \& Sciences

Total Credits: 27

## Introductory Core

In addition to management coursework taken within other skills areas, students are required to complete the following coursework in the management core:

SOM 122 - Perspectives of Business and

Management (fall only)
LPP 255 - Introduction to the Legal System
ACC 151 - Introduction to Financial Accounting
ACC 252 - Intro to Managerial Acc
Integrated Core 1 (fall only)
FIN 256 - Corporation Finance
MAR 255 - Principles of Marketing
SCM 265 - Introduction to Supply Chain
Management

## Integrated Core 2 (spring only)

MGT 247 - Introduction to Strategic Management
MGT 248 - Principles of Management
SOM 354 - Managing in a Global Setting

## Senior Capstone

EEE 457 - Strategic and Entrepreneurial Management

Total Credits: 31

## Major Field Specialization

All students, except those majoring in CPA accounting, take 15 credits in the major area beyond core requirements. Students must contact an academic advisor in the chosen major field to discuss specific requirements.

Total Credits: 15

## Business Elective

A business elective is any upper-division course in the Whitman School that gives credit but is not used to fill requirements in other groups. This course cannot be from the student's major area.

## Total Credits: 3

## Free Electives

Students complete additional credits from any credit-bearing course with the following conditions: no more than 3 credits of physical education, health, or music ensemble may be used; and students may not take courses considered to have content that duplicates courses already taken.

Total Credits: 12

## Accounting

## ACC 151 - Introduction to Financial Accounting

## Martin J. Whitman School of Management

4 credit(s) Every semester
Financial accounting concepts that aid entrepreneurs, managers, investors, and creditors in planning, operating, and analyzing a business. Emphasis is on interpretation of financial statements.

## ACC 201 - Essentials of Accounting

Martin J. Whitman School of Management 3 credit(s) Every semester Introduction for non-Whitman students to financial and managerial accounting and reporting concepts used by entrepreneurs and managers in planning and decision making.

## ACC 252 - Intro to Managerial Acc

## Martin J. Whitman School of Management

 3 credit(s) Every semester Introduction to the role of accounting information systems in measuring performance, influencing employee behavior, and facilitating planning decisions such as what products and services to offer, in which markets, and at what prices. PREREQ: ACC 151
## ACC 356 - Intermediate Financial Accounting I

Martin J. Whitman School of Management 3 credit(s) Every semester Double Numbered with: ACC 601
Accounting concepts and standards. Topics include: accounting cycle; income determination; financial statements; measurement and valuation of assets including cash, investments, receivables, inventory, property, plant, and equipment, and intangibles. Additional work required of graduate students.
PREREQ: ACC 252

## ACC 357 - Intermediate Financial Accounting II

Martin J. Whitman School of Management 3 credit(s) Every semester Double Numbered with: ACC 602
Accounting concepts and standards. Topics include: accounting cycle, financial reporting, financial statement analysis, cash flows, income tax allocation, measurement and valuation of liabilities; equity, leases, and pensions. Additional work required of graduate students.
PREREQ: ACC 356

## ACC 363-Cost Analysis \& Control

## Martin J. Whitman School of Management

3 credit(s) Every semester
Double Numbered with: ACC 621
In-depth examination of costing products and services, and using cost information in planning and control decisions. Pricing, budgeting, standards, strategic cost systems, just-in-time/ backflushing costing, and activity-based costing. Additional work required of graduate students. Junior standing or graduate status.
PREREQ: ACC 252

## ACC 385 - Principles of Taxation

Martin J. Whitman School of Management 3 credit(s) Every semester
Double Numbered with: ACC 685
Tax planning and taxation of business transactions, such as basis, gains, losses, nontaxable exchanges, depreciation, amortization, other business deductions, and tax credits. Research and communication skills. Extra work required of graduate students.
PREREQ: ACC 252

## ACC 476 - Auditing Theory/Practice

Martin J. Whitman School of Management
3 credit(s) Every semester
Double Numbered with: ACC 726
Audit practice and reporting on financial statements. Audit standards, the demand for auditing, and regulatory, legal, and ethical influences on auditors. Audit objectives, evidence, control environment, and risk assessments. Case studies and problems. Extra work required of graduate students.
PREREQ: ACC 357

## ACC 477 - Advanced Financial Accounting

Martin J. Whitman School of Management
3 credit(s) Every semester
Double Numbered with: ACC 756
Accounting and reporting for business combinations, foreign currency transactions, derivatives, and governmental entities. Extra work required of graduate students.
PREREQ: ACC 357 OR 602

## ACC 481 - Taxation of Business Entities

Martin J. Whitman School of Management
3 credit(s) Irregularly
Double Numbered with: ACC 777
Federal taxation of the formation, operation, liquidation, and reorganization of partnerships, subchapter C, subchapter S, and limited liability corporations. Federal taxation of partners and shareholders. Extra work required of graduate students.
PREREQ: ACC 385 OR 685

## ACC 499 - Honors Capstone Project

Martin J. Whitman School of Management 1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Business Administration

## BUA 200 - Selected Topics

## Martin J. Whitman School of Management

## 1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BUA 201 - Business Essentials I

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Business fundamentals taught through the operation of a fictional company. Multiple professors teach how the principles of accounting, finance, management, entrepreneurship, marketing, supply chain, retail and law work together within the business.

## BUA 202 - Business Essentials II

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Advanced business fundamentals taught through the operation of a fictional company. Multiple professors teach how accounting, finance, management, entrepreneurship, marketing, supply chain, retail and law work together for a deeper understanding of the business.
PREREQ: BUA 201

## BUA 470 - Experience Credit

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## BUA 480 - International Course

## Martin J. Whitman School of Management

 1-12 credit(s) IrregularlyOffered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## BUA 490 - Independent Study

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## BUA 499 - Honors Capstone Project

Martin J. Whitman School of Management 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Entrepreneurship and Emerging Enterprises

## EEE 110 - Discovering the Entrepreneur Within

Martin J. Whitman School of Management 1 credit(s) Every semester
Self-exploration of issues surrounding creativity, innovation, and entrepreneurship (CIE) as they apply in all facets of life. Students apply their creative potential in various contexts, including a community-based social entrepreneurship project. Students must be enrolled in the Creativity, Innovation, and Entrepreneurship Learning Community.
Repeatable 2 time(s), 3 credits maximum

## EEE 200 - Selected Topics

## Martin J. Whitman School of Management

 1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable
## EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises

Martin J. Whitman School of Management 3 credit(s) Every semester Course focuses on what it takes to start, grow, and sustain new ventures. Topics include: understanding entrepreneurs and their teams, evaluating opportunities, creating a venture plan, securing resources. Readings and guest lecturers emphasized.

## EEE 375 - Entrepreneurial Family Business Management

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Examines family business issues, such as managing relationships, communication and
conflict, ownership and governance, strategy, and succession. Focus is entrepreneurial management of family firms, including maintaining an entrepreneurial spirit throughout the firm and across generations.

## EEE 378 - Imagination, Entrepreneurship and Creative Problem Solving

## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring Creativity and ideation as they relate to entrepreneurship. Perspectives on opportunity discovery and assessment are examined. Theoretical and conceptual foundations for the application of creativity to business problem solving are investigated.
PREREQ: EEE 370

## EEE 382 - Entrepreneurial Marketing

## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring Double Numbered with: EEE 682 The interface between entrepreneurship and marketing, including both the role of entrepreneurial thinking in marketing practice, and the marketing issues in new ventures. Exploration of emerging marketing forms, including guerilla, viral, and buzz marketing. Additional work required of graduate students.

## EEE 400 - Selected Topics

Martin J. Whitman School of Management 1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EEE 420 - Corporate Entrepreneurship

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: EEE 621
Examination of the application of
entrepreneurship concepts and behaviors within established organizations, assessment of factors contributing to a company's entrepreneurial orientation, and identification of ways to foster higher levels of entrepreneurship within firms. PREREQ: EEE 370

EEE 439 - Entrepreneurship and Digital Commerce

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
The role of emerging digital technologies and the internet in creating entrepreneurial opportunities. PREREQ: EEE 370

## EEE 440 - Social Entrepreneurship in Action

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Opportunities and challenges associated with using entrepreneurial solutions to address social problems. Applications include analyzing, launching, and operating social purpose organizations.

## EEE 442 - Emerging Enterprise Law

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Law as regulator of emerging enterprises: formation, financing, siting the enterprise, intellectual property, debtor-creditor relations, global markets. Law as opportunity: in emerging fields such as pollution prevention, sustainable development, and international treaties. PREREQ: LPP 255

## EEE 443 - Emerging Enterprise Consulting

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Students nearing the completion of their studies work in consulting teams to assist local small firms and entrepreneurs. Problems are isolated and solutions are then developed and implemented. A team consultant's report is then prepared.

## EEE 444 - Dilemmas and Debates in Entrepreneurship

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Double Numbered with: EEE 644 Designed around a series of critical dilemmas confronted by entrepreneurs when creating and growing a venture. Entrepreneurs explore with students the issues surrounding these dilemmas in a structured format. Additional work required of graduate students.

## EEE 446 - Minority and Woman's Entrepreneurship: Race, Gender, and Entrepreneurial Opportunity

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Topics covered include: race, gender, and ethnicity as factors that impact entrepreneurship. The theoretical underpinnings of minority and women's entrepreneurship and their opportunities, challenges, and strategies to venture formation.

## EEE 450 - Sustainable Enterprise

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Economic, social, and environmental dimensions
of sustainability and their interdependence. Influences on organizations to adopt sustainable approaches to operations and activities. Tools to promote and validate organizational sustainability. Transdisciplinary emphasis.

## EEE 451 - Finance for Emerging Enterprises

Martin J. Whitman School of Management 3 credit(s) At least $1 x$ fall or spring
A hands-on case course on raising and managing working capital in the emerging enterprise. Topics include: factoring, venture capital, receivables and payables management, planning for sustainable growth, etc. Course requires use of computer spreadsheets.
PREREQ: EEE 370

## EEE 452 - International Entrepreneurship

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: INB 452
Double Numbered with: EEE 652
A fusion of two areas of study: global business and entrepreneurship. The theories, concepts, and tools of international business are discussed from the perspective of the entrepreneur. Additional work required of graduate students.

## EEE 457 - Strategic and Entrepreneurial Management

Martin J. Whitman School of Management 3 credit(s) Every semester
The capstone integrative experience for management majors culminating in the development of a comprehensive plan for a new business venture or a nonprofit organization. PREREQ: SCM 265

## EEE 458 - Business Plan Laboratory

## Martin J. Whitman School of Management

1 credit(s) Every semester
Applied discussions regarding research, data collection, analysis, debate, insight, and writing skills required to create quality plans for original new venture concepts. Attention is devoted to business plan logic, structure and audiences.

## EEE 464 - Entrepreneurial Empowerment

Martin J. Whitman School of Management 3 credit(s)
Double Numbered with: EEE 664
Hands-on course that introduces students to the South African context, township entrepreneurship, the basics of the consulting process, the Supporting Emerging Enterprise consulting model, and approaches to managerial issues in emerging enterprises. Offered in South Africa only.

## EEE 470 - Experience Credit

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## EEE 499 - Honors Capstone Project

## Martin J. Whitman School of Management

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Finance

## FIN 256 - Corporation Finance

Martin J. Whitman School of Management 3 credit(s) Every semester Principles and foundations of finance: time value of money, capital budgeting techniques, uncertainty and the risk/return trade-off, security market efficiency, cost of capital. Students may not receive credit for both FIN 256 and FIN 301. PREREQ: ECN 203 OR (ECN 101 AND ECN 102) AND (MAS 261 OR MAT 122 OR MAT 221) COREQ: MAR 255 AND SCM 265 AND ACC 252

## FIN 301 - Essentials of Finance

Martin J. Whitman School of Management 3 credit(s) Every semester Introduction to basics of finance: time value of money, capital budgeting techniques, uncertainty and the risk/return trade-off, security market efficiency, cost of capital. Students may not receive credit for both FIN 301 and FIN 256. PREREQ: ACC 151 OR ACC 201

## FIN 345 - Financial Management

Martin J. Whitman School of Management 3 credit(s) Every semester Problems and procedures of financial management encountered in normal operations of a corporation. Planning and controlling working capital needs. Capital budgeting. Financial capital needs. Dividend and expansion policies.
PREREQ: FIN 256 OR FIN 301
COREQ: MAS 362

## FIN 346 - Investments

## Martin J. Whitman School of Management

3 credit(s) Every semester
Analytical framework for investment decision making. Principles and techniques of analyzing industries and companies, managing specific portfolios.

PREREQ: FIN 256 OR FIN 301
COREQ: MAS 362

## FIN 355 - Money \& Banking

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring General principles: organization and control of the banking system, commercial bank functions and operations, organization and operation of the Federal Reserve System, and monetary theory and policy.

## FIN 378 - Financial Planning

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Introduction to financial planning concepts, including analysis of personal financial statements, tax planning, credit management, retirement planning, estate planning, and insurance planning.
PREREQ: FIN 256 OR FIN 301

## FIN 400 - Selected Topics

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## FIN 453 - New and Emerging Markets

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: INB 453
Analysis of the business, economic, and financial environment of emerging markets. Portfolio investment and corporate finance in emerging markets.
PREREQ: FIN 256 OR FIN 301

## FIN 457 - Internatl Financial Manag

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Exchange rate, determination and forecasting, currency exposure management, international capital budgeting, cost of capital, international financial markets, currency based derivative markets, international taxation, and banking. Foreign direct investment and theory of the multinational enterprise.
PREREQ: FIN 256 OR FIN 301

## FIN 458 - Fin Instns/Portfolio Mgmt

Martin J. Whitman School of Management 3 credit(s) Irregularly
Goals, practices, and problems of various investing institutions. Modern portfolio theories and techniques.
PREREQ: FIN 346

## FIN 459 - Introduction to Derivatives

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: FIN 659
Pricing, market structure, hedging, trading strategies, arbitrage relationships, and applications to corporate securities for options and futures contracts, swaps, and other derivative instruments. Additional work required of graduate students.
PREREQ: FIN 256 OR FIN 301

## FIN 461 - Financial Modeling

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Build models for financial statement analysis, valuation, capital budgeting, capital structure, portfolio selection, interest rate risk, option valuation, and other areas of finance using a computer tool such as Microsoft Excel.
PREREQ: FIN 345 AND FIN 346
FIN 463 - Model Building for Investment Banking, Equity Research, and Credit Analysis

Martin J. Whitman School of Management
3 credit(s) Only during the summer PREREQ: ACC 356

## FIN 464 - Institutional Trading

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Double Numbered with: FIN 664 The course focuses on the practical aspects and costs of trading, and will facilitate an understanding of the trading problem, including order types, order routing processes and latest developments in securities markets and regulations. Additional work required of graduate students.

## FIN 465 - The Securities Market

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: FIN 665
Role and nature of securities markets in our economy and the needs they serve. Market concept; criteria for studying the effectiveness of securities markets.
PREREQ: (FIN 256 OR FIN 301) AND MAS 362

## FIN 466 - Value Investing

Martin J. Whitman School of Management 3 credit(s) Every semester Double Numbered with: FIN 666 The fundamentals of value investing through the analysis of public corporate businesses and the securities and credit instruments they issue. Investment vs. speculation. Real world cases and applications. Additional work required of graduate
students.
PREREQ: FIN 256 OR FIN 301

## FIN 468 - Seminar in Finance

Martin J. Whitman School of Management 3 credit(s) Irregularly
Double Numbered with: FIN 668
Specialized work for advanced students on particular phase or topic in finance. Reading, reports, and thesis.
PREREQ: FIN 256 OR FIN 301

## FIN 469 - Distress Investing

Martin J. Whitman School of Management 3 credit(s) Only during the summer Double Numbered with: FIN 669 The course prepares you to understand, analyze and evaluate investments in the securities of companies in financial distress. Uses a practical approach to learning as well as hands on experience analyzing actual special situations. PREREQ: FIN 256 OR FIN 301

## FIN 471 - Financial Instit \& Mkts

Martin J. Whitman School of Management 3 credit(s) Irregularly
Commercial banks, savings institutions, credit unions, finance companies, investment companies, securities firms, pension funds, insurance companies, bank regulations, bankoff balance sheet activities, interest rate and exchange rate determination, interest rate management in financial institutions, financial markets and instruments, international banking. PREREQ: FIN 256 OR FIN 301

## FIN 472 - Case Studies in Real Estate Investment and Finance

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: RES 472
Double Numbered with: FIN 672
The course examines different areas of the real estate market. Analysis of the real estate space market, the real estate capital markets, cash flow analysis and different financing techniques, with examples in different property types. Additional work required of graduate students.

## FIN 473 - Control Investing

## Martin J. Whitman School of Management

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: FIN 673
What control investors do and how they do it: friendly and hostile takeovers, leveraged buyouts and other contests for control are covered. PREREQ: FIN 466

## International Business

## INB 366 - Economic Policies of the European Union

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring Crosslisted with: ECN 366
Offered only in Strasbourg. European economy, with central focus on economic principles underlying decisions to create and extend scope of European Community and on economic policies EU has followed since creation.

## INB 444 - Culture, Business and Political Economics in East Asia

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Crosslisted with: HST 444, IRP 444, PSC 444 Offered only in Hong Kong. Examines the historical and contemporary forces that shape the cultural, social and economic institutions in East Asia and how these institutions affect one another.

## INB 452 - International Entrepreneurship

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: EEE 452
Double Numbered with: INB 652
A fusion of two areas of study: global business and entrepreneurship. The theories, concepts, and tools of international business are discussed from the perspective of the entrepreneur. Additional work required of graduate students.

## INB 453 - New and Emerging Markets

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Crosslisted with: FIN 453
Analysis of the business, economic, and financial environment of emerging markets. Portfolio investment and corporate finance in emerging markets.
PREREQ: FIN 256 OR FIN 301

## INB 470 - Experience Credit

Martin J. Whitman School of Management 1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## Law and Public Policy

## LPP 255 - Introduction to the Legal System

Martin J. Whitman School of Management 3 credit(s) Every semester The legal system and public policy issues emphasizing the impact of the legal environment on management decision making. Includes ethics and international topics. Development of analytical and communication skills.

## LPP 300 - Selected Topics

## Martin J. Whitman School of Management

 1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable
## LPP 455 - Law of Business Organizations

## Martin J. Whitman School of Management

3 credit(s) Irregularly
Double Numbered with: LPP 755
Legal aspects of organizations formed to carry on business enterprises: agencies, partnerships, and corporations.
PREREQ: LPP 255 OR MBC 629 OR 643

## LPP 456 - Land Development Law

## Martin J. Whitman School of Management

 3 credit(s) IrregularlyDouble Numbered with: LPP 756 Regulations pertaining to land development. Nuisances, eminent domain, regulatory takings, zoning, growth, management controls, environmental impact analysis, and protection of sensitive land areas.
PREREQ: LPP 255 OR MBC 629 OR 643

## LPP 457 - Law of Commercial Transactions

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: LPP 757
Legal aspects of commercial transactions.
Contracts, sale of goods, commercial paper, and secured transactions.
PREREQ: LPP 255 OR MBC 629 OR 643

## LPP 458-Environmental Law and

 Public PolicyMartin J. Whitman School of Management
3 credit(s) Irregularly
Double Numbered with: LPP 758
Range of environmental problems from a legal and public policy viewpoint: air, water, and toxics pollution; solid and hazardous waste; and
environmental planning.

## LPP 459 - The Law of Global Business

## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring
Crosslisted with: SCM 459
The legal environment of international business: the framework of international law influencing international business. Topics include the international law and organizations, international contracts, carrier liability, customs, and world trade law.
PREREQ: LPP 255 AND SCM 265

## LPP 464 - Employment Law

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring The law of the employment relationship: employment-at-will, noncompete and nondisclosure covenants, equal employment opportunity legislation, labor relations and protective employment legislation. PREREQ: LPP 255

## LPP 465 - Business and Contemporary Society

## Martin J. Whitman School of Management

 3 credit(s) IrregularlyRole of business in contemporary society. Relations of the private and public sectors. Techniques available to business to contribute to the solution of social problems.

## LPP 467 - Management and Ethics

## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring
Double Numbered with: LPP 767
Ethical dilemmas encountered by managers of organizations. Individual ethical responsibility versus role responsibility. Pressures within organizations to violate ethical duties. How an organization can be managed so that employees can deal effectively with ethical dilemmas. Extra work required of graduate students.

## LPP 499 - Honors Capstone Project

## Martin J. Whitman School of Management

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Marketing Management

## MAR 255 - Principles of Marketing

Martin J. Whitman School of Management
3 credit(s) Every semester
Marketing as a major business function and social process. Analysis of market forces. Marketing opportunities. Determination of price, product,
distribution, promotion, and organization policies required to control and fulfill planned marketing programs.
PREREQ: ECN 203 AND (MAS 261 OR MAT
122 OR MAT 221)
COREQ: FIN 256 AND SCM 265

## MAR 301 - Essentials of Marketing

## Martin J. Whitman School of Management

3 credit(s) Every semester
Exploration for non-Whitman students of the principles of marketing as a major business function and social process. Analysis of marketing forces. Marketing opportunities. Determination of price, product, distribution, promotion and organizational policies required.

## MAR 307 - Sales and Strategic

 PartnershipsMartin J. Whitman School of Management 3 credit(s) Every semester Crosslisted with: RMT 307 Applications of sales theory, concepts, training and technology in the fields of professional personal selling and sales management. PREREQ: MAR 255 OR MAR 301 OR RMT 301

## MAR 356 - Marketing Research

Martin J. Whitman School of Management 3 credit(s) Every semester
Application of various research methods to marketing. Planning, design, execution, and interpretation of applied marketing research studies.
PREREQ: MAR 255 OR MAR 301
COREQ: MAS 362

## MAR 357-Consumer Behavior

Martin J. Whitman School of Management
3 credit(s) Every semester
Motivation, learning theory, perception, attitude theory, and social referents: how they affect consumer behavior. Consumer measurement and strategy assessment.
PREREQ: MAR 255 OR MAR 301

## MAR 378 - Industrial Marketing

Martin J. Whitman School of Management 3 credit(s) Irregularly Industrial market behavior and market segmentation. Planning and marketing research. Determination of price, product, distribution and promotion in the context of industrial marketing. Industrial marketing evaluation and control.
PREREQ: MAR 255 OR MAR 301

## MAR 400 - Selected Topics

Martin J. Whitman School of Management
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not
covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MAR 401 - Electronic Retailing and Marketing

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: RMT 457
Overview of current e-tailing practices in business to consumer marketplace. Internet technology and capabilities.
PREREQ: MAR 255 OR 301

## MAR 407 - Sales Management in B2B Markets

## Martin J. Whitman School of Management

 3 credit(s) At least $1 x$ fall or spring This course covers managing a sales force and a firm's selling effort. Topics include strategic planning, designing and developing a sales force, managing major accounts, sales marketing alignment and how sales people create value. PREREQ: MAR 255 OR MAR 301
## MAR 444 - New Product Management

Martin J. Whitman School of Management 3 credit(s) At least $1 x$ fall or spring The product innovation process. Learning how managers can best use models and analytical tools to improve decision-making in the development, launch, and management of new products.
PREREQ: MAR 255 OR MAR 301

## MAR 445 - Brand Management

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Concepts and tools essential for performing the role of a brand manager in a dynamic and competitive market. Coordinating marketing activities to achieve a profitable and sustainable market position of the brand.
PREREQ: MAR 255 OR MAR 301

## MAR 455 - Marketing Communications

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Management of marketing communications. Topics include budgets, planning campaigns, controlling impact and coordinating information flows. PREREQ: MAR 255 OR MAR 301

MAR 456 - Global Marketing Strategy
Martin J. Whitman School of Management 3 credit(s) Every semester
Building on concepts from previous marketing courses, this capstone course provides students both research and conceptual tools for understanding and making decisions about
marketing strategy in the rapidly changing global environment.
PREREQ: MAR 255 OR MAR 301

## MAR 499 - Honors Capstone Project

Martin J. Whitman School of Management 1-3 credit(s) Every semester Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Managerial Statistics

## MAS 261 - Introductory Statistics for Management

Martin J. Whitman School of Management 3 credit(s) Every semester Basic statistical theory and data analysis methods. Describing data graphically and numerically. Probability distributions. Sampling. Statistical tests and intervals. Use of computer statistics programs. Emphasis on choice, limitations, and interpretation of methods for management use.

## MAS 362 - Decision Tools for Management

Martin J. Whitman School of Management 3 credit(s) Every semester Review of important statistical concepts. Mathematical models for management data emphasizing correct use and interpretation of results. Linear and logistic regression. Time series analysis. Model assumptions and limitations. PREREQ: MAS 261 OR MAT 122 OR MAT 221

## MAS 423 - Introduction to Nonparametric Statistics

## Martin J. Whitman School of Management

 3 credit(s) IrregularlySelected nonparametric statistical methods; those requiring few assumptions about the population. Related aspects of probability theory, hypothesis formulation and testing, and estimation for population location, dispersion, and functional form.
PREREQ: MAS 362

## MAS 465 - Applied Sample Survey Methods

Martin J. Whitman School of Management 3 credit(s) Irregularly
Survey methods applicable to management and other social science areas. Various sample designs: cost and accuracy, estimation for population location, dispersion, and functional form. PREREQ: MAS 362

## MAS 466 - Data Mining for Managers

## Martin J. Whitman School of Management

 3 credit(s) IrregularlyStatistical approach to data mining; regression, time series, and multivariate methods applied to management. Analysis of high frequency data, large data set; forecasting, classification; neural network methods; case examples.
PREREQ: MAS 362

## MAS 477 - Time Series Analysis and Forecasting

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Basic concepts applied to management. Discrete time-series analysis for forecasting and control. Selected statistical models. Regression analysis. ARIMA methods, econometric modeling. Forecasting and business planning. Evaluation of forecasts. Case studies.
PREREQ: MAS 362

## MAS 488 - Introduction to Causal Models

Martin J. Whitman School of Management
3 credit(s) Irregularly
Analytical techniques for formulating and testing structural models with applications to management situations; path analysis; case examples.
PREREQ: MAS 362

## MAS 499 - Honors Capstone Project

Martin J. Whitman School of Management 1-3 credit(s) Every semester Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Management

## MGT 247 - Introduction to Strategic Management

Martin J. Whitman School of Management 3 credit(s) Every semester How a firm's leadership structure guides the strategic management process. Topics covered include the role of the CEO and top management team, internal and external analysis and strategy formulation and implementation.

## MGT 346-Organizational Behavior

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Individual and group behavior in complex organizations. Influence of organization structure and management practices on individual and group work behavior.

## MGT 355 - Strategic Human Resource Management

Martin J. Whitman School of Management 3 credit(s) Every semester Human resources as a source of competitive advantage and financial performance. Employment law, reward and control systems, human resource architecture, workforce development.

## MGT 447 - Advanced Topics in Strategic Management

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Solution of unstructured managerial problems requiring the application of students' integrated knowledge of the management curriculum using comprehensive organizational case problems.
PREREQ: MGT 247 AND FIN 256 AND MAR 255 AND SCM 265

## MGT 448 - Management in a Crosscultural Environment

Martin J. Whitman School of Management 3 credit(s) Irregularly
Factors that have an impact on managerial effectiveness in an international organization: language, religion, values and attitudes, educational structure, social organization, technology, political climate, and legal environment. Additional work required of graduate students.
PREREQ: SOM 354

## MGT 454 - Compensation

Administration
Martin J. Whitman School of Management
3 credit(s) Irregularly
Double Numbered with: MGT 754
Concepts, models, theories, and legislation related to employee compensation: wage theory, job analysis, job evaluation, job structure pricing, employee motivation, individual appraisal and reward, and benefits. Additional work required of graduate students.

MGT 462 - Leadership and Organization Change

## Martin J. Whitman School of Management

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: MGT 762
Nature of the organizational development field and dominant methods, models and perspectives taken. Opportunities provided to increase skills and effectiveness in diagnosing and intervening in ongoing systems. Additional work required of graduate students.

## MGT 499 - Honors Capstone Project

Martin J. Whitman School of Management
1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Management Information Systems

## MIS 270 - Experience Credit

Martin J. Whitman School of Management 1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## MIS 325 - Introduction to Information Systems for Managers

## Martin J. Whitman School of Management

 3 credit(s) Every semesterManagement and effective use of information systems and e-business technologies to improve business decision-making, conduct electronic commerce, revitalize business processes, and gain competitive advantage.

## MIS 335 - Information Systems for Decision Support

## Martin J. Whitman School of Management

 3 credit(s) IrregularlyDecision-making and decision modeling skills for improving business performance. Design and programming of business applications using MSExcel and Visual Basic Applications (VBA). PREREQ: MIS 325

## MIS 345 - Development and Programming of Business Applications

## Martin J. Whitman School of Management

3 credit(s) Irregularly
Use of a programming language in the structural design and implementation of business applications. Use of good software design principles and cross-platform application integration capabilities.

## MIS 355 - Management of Information Systems

Martin J. Whitman School of Management 3 credit(s) Irregularly
Concepts and techniques in managing the development and utilization of information systems. Systems planning, development, implementation, and control.

## MIS 365 - Business Value of Information Technology

Martin J. Whitman School of Management 1.5 credit(s) At least 1 x fall or spring Crosslisted with: GET 365
Financial measures of IT value including TCO, ROI, and NPV; non-financial dimensions of business value such as strategic fit, IT investment risk; IT governance and IT models; measuring IT performance; IT change management.

## MIS 375 - Management of Information Technology Contracting

Martin J. Whitman School of Management
1.5 credit(s) At least $1 x$ fall or spring Crosslisted with: GET 375
Budgeting and controlling IT costs; IT procurement including requirements specification, requests for proposals, evaluation criteria, and vendor selection; evaluating and managing vendor performance; developing and monitoring contracts.

## MIS 425 - Management Information Systems Analysis and Design

Martin J. Whitman School of Management 3 credit(s) Irregularly
Management of information systems development from a business perspective. Focus on mainstream and emerging systems analysis and design techniques. First-hand experience with commercial tools used in information systems development projects.
PREREQ: MIS 325

## MIS 435 - Principles of Database Management

Martin J. Whitman School of Management
3 credit(s) Irregularly
Database and data warehousing concepts, design principles, and methods of use in assisting management decision-making and in building Web-based database applications. Focus on widely used commercial database environments. PREREQ: MIS 325

## MIS 445 - Implementing a Webenabled Enterprise

Martin J. Whitman School of Management 3 credit(s) Irregularly Double Numbered with: MIS 645 Identify a business opportunity, develop an e-business strategy, and design the web store. Gain hands-on experience in setting up a fully functional web store.

## MIS 499 - Honors Capstone Project

## Martin J. Whitman School of Management

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Military Science

## MSL 101 - Leadership and Development

Martin J. Whitman School of Management $0-3$ credit(s) At least $1 x$ fall or spring Basic drill and ceremonies, physical conditioning, land navigation, first aid, leadership techniques, weapons familiarization, and small-unit tactics.

## MSL 102 - Foundations of the US Army

Martin J. Whitman School of Management $0-3$ credit(s) At least $1 x$ fall or spring Leadership fundamentals such as goal setting, problem solving, leadership attributes, core values.

## MSL 201 - Innovative Team Leadership

## Martin J. Whitman School of Management

$0-3$ credit(s) At least $1 x$ fall or spring Leadership strategies and styles by examining team dynamics and leadership theories.

## MSL 202 - Leadership and Problem Solving

Martin J. Whitman School of Management $0-3$ credit(s) At least $1 x$ fall or spring Examines challenges of leading teams; exploring the dynamics of adaptive leadership, practice / assess own leadership and communication styles.

## MSL 301 - Leading Small Organizations

## Martin J. Whitman School of Management

$0-3$ credit(s) At least $1 x$ fall or spring This course is designed to teach small unit leadership and introduce students to the planning process and Army operations.

## MSL 302 - Advanced Leadership

Martin J. Whitman School of Management $0-3$ credit(s) At least $1 x$ fall or spring Junior- and senior-level courses expanding on basic subject areas. Leadership and management development: command, control, staff operations, planning and organizing.

## MSL 401 - Military Professionalism and Ethics

Martin J. Whitman School of Management $0-3$ credit(s) At least $1 x$ fall or spring

How Army values and leader ethics are applied and how they are relevant to everyday life.

## MSL 402 - Leadership in a Complex World

Martin J. Whitman School of Management $0-3$ credit(s) At least $1 x$ fall or spring Examines dynamics of leading in complex situations. Study rules of engagement in the face of international terrorism and interacting with non government organizations.

## Organization and Management

0\&M 405 - Concepts of Air Force Management
Martin J. Whitman School of Management
$0-3$ credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 305
Theory and application of general concepts of leadership to Air Force situations. Group discussions, case studies, and role playing. Oral and written reports.

## 0\&M 406 - Concepts of Air Force Management

## Martin J. Whitman School of Management

$0-3$ credit(s) At least $1 x$ fall or spring Crosslisted with: ASC 306
General theory and practice of management, especially in the Air Force. Information systems, quantitative approaches to decision making, and resource control techniques used by Air Force managers.
PREREQ: O\&M 405 OR ASC 305

## Personnel Relations

## PIR 499 - Honors Capstone Project

Martin J. Whitman School of Management 1-3 credit(s) Every semester Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Quantitative Methods

## QUM 499 - Honors Capstone Project

## Martin J. Whitman School of Management

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under
the supervision of a faculty member
Repeatable 2 time(s), 3 credits maximum

## Real Estate

## RES 400 - Selected Topics

## Martin J. Whitman School of Management

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## RES 431 - Real Estate Principles

## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring
The understanding of real estate fundamentals, including roles, activities, terminology, transaction processes and how the tools and models in real estate are used to make informed decisions, with emphasis on developing valuation skills.
PREREQ: FIN 256 OR FIN 301

## RES 442 - Real Estate Development

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: RES 642
Build understanding of the real estate development process. Deliver the prerequisite understanding of terms, concepts and competencies necessary for a basic understanding of and participation in real estate development.
PREREQ: FIN 256 OR FIN 301

## RES 443 - Real Estate Capital Markets

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: RES 643
Real estate debt and equity instruments. Primary and secondary mortgage markets, mortgage banking, loan instruments, and securitization. Lender and borrower decisions regarding real estate financing. Additional work required of graduate students.
PREREQ: FIN 256 OR FIN 301 AND RES 431

## RES 462 - Real Estate Finance and

 Investment
## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring
Real estate investment, finance, and valuation. Different measures of investment performance, impact of the financing decision, and various real estate financing techniques.
PREREQ: RES 431

## RES 470 - Experience Credit

Martin J. Whitman School of Management 1-6 credit(s) Repeatable

## RES 472 - Case Studies in Real Estate Investment and Finance

## Martin J. Whitman School of Management

3 credit(s) At least 1x fall or spring
Crosslisted with: FIN 472
Double Numbered with: RES 672
The course examines different areas of the real estate market. Analysis of the real estate space market, the real estate capital markets, cash flow analysis and different financing techniques, with examples in different property types. Additional work required of graduate students.
PREREQ: FIN 256 AND RES 431

## Retail Management

## RMT 301 - Retailing Fundamentals

## Martin J. Whitman School of Management

3 credit(s) Every semester
Retail mix: location, layout, organization, merchandise, pricing, customer services, sales promotion, and consumer trends. Retail research introduced through examination of target market and demographics.

## RMT 307 - Sales and Strategic Partnerships

Martin J. Whitman School of Management
3 credit(s) Every semester
Crosslisted with: MAR 307
Applications of sales theory, concepts, training and technology in the fields of professional personal selling and sales management. PREREQ: MAR 255 OR MAR 301 OR RMT 301

## RMT 314 - Product Development for Retail Management

## Martin J. Whitman School of Management

3 credit(s) Every semester
Processes involved in total soft goods product development cycle from managerial perspective. Includes forecasting, costing, pricing, global trade agreements, tariffs, sourcing, distribution, and marketing.
PREREQ: RMT 301

## RMT 333 - Professional Practice

Martin J. Whitman School of Management 1 credit(s) Every semester Necessary career skills and job search strategies to be successful on their career track. Topics include networking tactics, cover letter composition, resume writing, interview skills, and on-the-job interpersonal strategies.

RMT 357 - Visual Merchandising and Store Planning

Martin J. Whitman School of Management
3 credit(s) Every semester

Composition, color, and design theory applied to merchandise display in retail setting. Fundamentals of store planning: space allocation, lighting, exteriors.
PREREQ: RMT 301

## RMT 407-Retail Buying and Planning

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring Introduction to the fundamental strategies and mathematical calculations used in the retail industry including financial strategy, buying strategy, and pricing strategy.
PREREQ: RMT 301

## RMT 457 - Electronic Retailing and Marketing

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: MAR 401
Overview of current e-tailing practices in business to consumer marketplace. Internet technology and capabilities.
PREREQ: MAR 255 OR MAR 301 OR RMT 301

## RMT 475 - Supervised Internship

Martin J. Whitman School of Management
2 credit(s) At least 1 x fall or spring
Individual work experience related to student's
major area of interest and career goal. On-the-job supervised experience integrated with classroom history.
PREREQ: RMT 333

## RMT 490 - Independent Study

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Repeatable

## RMT 499 - Honors Capstone Project

Martin J. Whitman School of Management
1-6 credit(s)
Repeatable

## Supply Chain Management

## SCM 265 - Introduction to Supply Chain Management

Martin J. Whitman School of Management 3 credit(s) Every semester
The concepts, issues, and techniques for managing supply chains. Analysis and problems of material and information flows in supply chains. Must be taken with FIN 256 and MAR 255. PREREQ: (ECN 203 OR (ECN 101 AND ECN 102)) AND (MAS 261 OR MAT 122 OR MAT 221)

## SCM 400 - Selected Topics

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SCM 401 - Supply Chain and Logistics Management

## Martin J. Whitman School of Management

3 credit(s) Every semester
Influence of supply chain management and logistics on corporate strategy and profitability. Topics include transportation economics and operations, customer service, and international logistics, as well as other related topics. PREREQ: MAR 255 AND SCM 265

## SCM 402 - Supply Chain Management Systems

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Supply chain management systems: electronic communication, scanning, and tracking systems, enterprise-wide transactional systems, material and distribution requirements planning, supply chain planning.
PREREQ: MAR 255 AND SCM 265

## SCM 403 - Introduction to Management Science

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Modeling techniques and applications for managerial decision making.
PREREQ: SCM 265 AND MAS 261 OR MAT 122 OR MAT 221

## SCM 421 - Fundamentals of Sourcing

Martin J. Whitman School of Management 3 credit(s) At least $1 x$ fall or spring Impact of purchasing and supply chain management on competitive success. Ethical, contractual, and legal issues faced by purchasing professionals. Strategic nature of purchasing, negotiating tactics, and cutting-edge technology used in "world class" purchasing departments.
PREREQ: MAR 255 AND SCM 265

## SCM 431 - Transportation and Distribution Center Management

Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring Explores carrier management and operations. Studies distribution center design and operations in-depth. Includes hands-on experience in working real world distribution center and transportation problems.

PREREQ: MAR 255 AND SCM 265

## SCM 455 - Lean Six Sigma

Martin J. Whitman School of Management 3 credit(s) At least 1 x fall or spring Double Numbered with: SCM 755
Six sigma process-improvement approach focused on quality, reliability and value to customers. Skills include techniques from the define, measure, analyze, improve and control (DMAIC) approach. Lean concepts from supply chain management. Additional work required of graduate students. PREREQ: SCM 265 AND MAS 362

## SCM 456 - Introduction to Project Management

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Elements of successful project management. The organization and planning necessary from requirements definition to project closure. Project management processes and techniques. PREREQ: SCM 265

## SCM 459 - The Law of Global Business

Martin J. Whitman School of Management
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: LPP 459
The legal environment of international business: the framework of international law influencing international business. Topics include the international law and organizations, international contracts, carrier liability, customs, and world trade law.
PREREQ: SCM 265 AND LPP 255

## SCM 477 - Global Supply Chain Management

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring This course covers global facility network design, logistical planning across borders, the impact of duties, duty drawbacks and tax differentials, and benefits and risks (e.g. disruption) in outsourcing and offshoring manufacturing and service operations.
PREREQ: SCM 265

## SCM 499 - Honors Capstone Project

## Martin J. Whitman School of Management

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## School of Management

## SOM 110 - Management Learning Community Seminar

Martin J. Whitman School of Management 1 credit(s) At least 1 x fall or spring Discussion of connections between coursework and out-of-classroom experiences. Divided into three sections: how one learns, process of learning, and impact of learning environment. COREQ: SOM 122 AND WRT 105

## SOM 122 - Perspectives of Business and Management

Martin J. Whitman School of Management 3 credit(s) At least 1x fall or spring Understanding of role and responsibility of management in society; fundamental knowledge of nature and integration of functional disciplines in business; skills essential to effective management; development of base for academic/ career mission and achievement.

## SOM 144 - Transition to Whitman School of Management

Martin J. Whitman School of Management 1 credit(s) Every semester Introduction to Whitman School of Management and Syracuse University for external transfer students. Topics include rules and regulations, programs, academic opportunities, and Syracuse and campus life. Reading and writing on University life and issues.

## SOM 201 - Community Service for Management Students

## Martin J. Whitman School of Management

0 credit(s) Every semester
Students develop and practice leadership skills in public or not for profit agencies by integrating and applying academic knowledge to problems. Designed to cultivate in students the commitment for a lifetime participation in the community.

## SOM 290 - Independent Study

Martin J. Whitman School of Management 1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable, 6 credits maximum

## SOM 301 - Internship for Management Students <br> Martin J. Whitman School of Management <br> 0 credit(s) Every semester <br> Students develop and practice leadership skills <br> by applying knowledge gained in their academic

program to business problems and needs. Intended to encourage mutually beneficial relationships among students and businesses.

## SOM 354 - Managing in a Global Setting

Martin J. Whitman School of Management 3 credit(s) Every semester Introduction to the concepts, framework, and issue of global business and how they influence management decisions: multinational firms; international trade; and the cultural, political, institutional, social, and economic environment of the global marketplace.

## SOM 490 - Independent Study

Martin J. Whitman School of Management 1-6 credit(s)
Repeatable

## SOM 499 - Honors Capstone Project

Martin J. Whitman School of Management
1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Martin J. Whitman School of Management Faculty

Susan Albring, Associate Professor of Accounting Ph.D., University of Arizona, 2003
Alejandro Amezcua, Assistant Professor of Entrepreneurship
Ph.D., Syracuse University, 2011
Amber Anand, Associate Professor of Finance Ph.D., Baruch College, 2001

Kofi Appiah Okyere, Assistant Professor of Accounting
Ph.D., University of Wisconsin-Madison, 2005
Karca Aral, Assistant Professor of Supply Chain Management
Ph.D., INSEAD, 2014
Natarajan Balasubramanian, Associate Professor of Management
Ph.D., University of California, Los Angeles, 2007
Tom Barkley, Assistant Professor of Finance Ph.D., University of Florida, 2007
Amiya Basu, Professor of Marketing
Ph.D., Stanford University, 1984
Michel Benaroch, Associate Dean for Research, Professor of Management Information Systems Ph.D., New York University, 1992

Pamela Brandes, Associate Professor of

Management
Ph.D., University of Cincinnati, 1997
Markus Broman, Assistant Professor of Finance Ph.D., York University, 2015

George R. Burman, Professor of Entrepreneurship Ph.D., University of Chicago, 1973
Donald Cardarelli, Assistant Professor of Management
M.B.A., Syracuse University, 1989; Ph.D. (honorary), Nazareth College, 1997

Anna Chernobai, Associate Professor of Finance Ph.D., University of California at Santa Barbara, 2006

Joseph Comprix, Chair and Associate Professor of Accounting
Ph.D., University of Illinois, 2000
Linda M. Cushman, Associate Professor of Retail Management
Ph.D., University of Tennessee-Knoxville, 1995
Ravi Dharwadkar, Professor of Management Ph.D., University of Cincinnati, 1997

Fernando Diz, Martin J. Whitman Professor of Finance, Director of Ballentine Investment Institute Ph.D., Cornell University, 1989

Frederick Easton, Professor of Supply Chain Management, Director of the Robert H. Brethen Operations Management Institute Ph.D., University of Washington, 1986

Gerald Edmonds, Adjunct Professor, Marketing Ph.D., Syracuse University, 1997

Randal Elder, Professor of Accounting
Ph.D., Michigan State University, 1993
Scott Fay, Associate Professor of Marketing Ph.D., University of Michigan, 2001
Dinesh Gauri, Associate Professor of Marketing Ph.D., State University of New York at Buffalo, 2007

Will Geoghegan, Visiting Assistant Professor of Management
Ph.D., National University of Ireland, Galway, 2009
Dennis J. Gillen, Associate Professor of
Management
Ph.D., University of Maryland, 1981
David Harris, Professor of Accounting, Director of Bennett Center for Tax Research
Ph.D., University of Michigan, 1994
Jeffrey Harris, Dean's Professor of Finance
Ph.D., Ohio State University, 1995
Donald Harter, Associate Dean for Masters Programs, Associate Professor of Management Information Systems
Ph.D., Carnegie Mellon University, 2000
J. Michael Haynie, Barnes Professor of Entrepreneurship
Ph.D., University of Colorado at Boulder, 2005

Badr Ismail, Professor Emeritus of Accounting Ph.D., University of Illinois, 1974

Kenneth A. Kavajecz, Dean of the Martin J. Whitman School of Management, Professor of Finance
Ph.D., Northwestern University, 1997
Burak Kazaz, Associate Professor of Supply Chain, Executive Director of The HH Franklin Center for Supply Chain Management
Ph.D., Purdue University, 1997
Lisa Knych, Professor of Law and Public Policy J.D., Syracuse University, 1985

Roger Koppl, Professor of Finance
Ph.D., Auburn University, 1988
Alexandra Kostakis, Professor of Entrepreneurial Practice
M.B.A., New York University, 1995

Peter E. Koveos, Walter and Olivia Kiebach Chair in International Business, Professor of Finance, Senior Director of International Programs Ph.D., Pennsylvania State University, 1977

Gary LaPoint, Professor of Supply Chain Practice M.B.A., Syracuse University, 1987
E. Scott Lathrop, Professor of Marketing Practice Ph.D., Cornell University, 1994

Eunkyu Lee, Chair and Professor of Marketing Ph.D., Duke University, 1993

Lihong Liang, Assistant Professor of Accounting Ph.D., Pennsylvania State University, 2002

Susan Long, Associate Professor of Managerial Statistics, Co-Director of Transactional Records
Access Clearinghouse
Ph.D., University of Washington, 1980
Lai Xu, Assistant Professor of Finance
Ph.D., Duke University, 2014
G. Thomas Lumpkin, The Chris J. Witting Chair in Entrepreneurship
Ph.D., University of Texas at Arlington, 1996
Catherine Maritan, Associate Professor of Management
Ph.D., Purdue University, 1998
Tridib Mazumdar, Howard R. Gendal Professor of Marketing
Ph.D., Virginia Polytechnical Institute, 1987
Alexander McKelvie, Chair and Associate Professor of Entrepreneurship
Ph.D., Jönköping International Business School, 2007

Maria Minniti, Bantle Chair in Entrepreneurship and Public Policy
Ph.D., New York University, 1997
MaryAnn Monforte, Professor of Accounting Practice
M.B.A., Syracuse University, 1995

Todd Moss, Assistant Professor of

Entrepreneurship
Ph.D., Texas Tech University, 2010
D. Craig Nichols, Assistant Professor of Accounting Ph.D., Indiana University, 2005

Amanda G. Nicholson, Associate Dean for Undergraduate Programs and Professor of Retail Practice
Ph.D., Syracuse University, 2011
Georgette Nicolaides, Professor of Statistics Practice
M.B.A., University of Texas at Arlingon, 2003

Julie Niederhoff, Assistant Professor of Supply Chain Management
Ph.D., Washington University in St. Louis, 2007
Kofi Appiah Okyere, Professor of Accounting Practice
Ph.D., University of Wisconsin-Madison
John Hyung Park, Visiting Professor of Supply Chain
Ph.D., Syracuse University, 2012
Patrick Penfield, Professor of Supply Chain Practice, Director of Executive Programs M.B.A., Le Moyne College, 1998

John Petosa, Professor of Accounting Practice J.D., Syracuse University, 1995

Milena Petrova, Assistant Professor of Finance Ph.D., University of Florida, 2006
S.P. Raj, Distinguished Professor of Marketing Ph.D., Carnegie Mellon University, 1980

Lindsay Rapp, Assistant Dean of Undergraduate Programs
M.A., George Washington University, 2007

Kira Reed, Associate Professor of Management
Ph.D., University of Connecticut, 2000
Daniel Rice, Professor of Practice, Law and Public Policy
J.D., Syracuse University, 1990

Breagin Riley, Assistant Professor of Marketing Ph.D., Northwestern University, 2009

Minet Schindehutte, Associate Professor of Entrepreneurship
Ph.D., University of South Africa, 1990
Jim Seward, Visiting Associate Professor of Finance
Ph.D., University of Wisconsin-Madison, 1987
Ravi Shukla, Chair and Associate Professor of Finance
Ph.D., State University of New York at Buffalo, 1989

Susan Smith, Professor of Marketing Practice M.B.A., Boston College, 1981

Clint B. Tankersley, Associate Professor of Marketing
Ph.D., University of Cincinnati, 1974
Alex Thevaranjan, Associate Professor of

## Accounting

Ph.D., University of Minnesota, 1993
John Torrens, Professor of Entrepreneurial Practice
Ph.D., Northcentral University, 2004
Frances Gaither Tucker, Associate Professor of Marketing and Supply Chain Management Ph.D., Ohio State University, 1980

Raja Velu, Professor of Managerial Statistics
Ph.D., University of Wisconsin, 1983
Lynne Vincent, Assistant Professor of Management Ph.D., Cornell University, 2013

Padmal Vitharana, Associate Professor of Management Information Systems
Ph.D., University of Wisconsin-Milwaukee, 2000
Ginger Wagner, Professor of Accounting Practice
M.B.A., Syracuse University, 2003

William J. Walsh, Professor of Accounting Practice, Director of Joseph I. Lubin School of Accounting M.B.A., Syracuse University, 1989

Kenneth Walsleben, Professor of Entrepreneurial Practice
BA, Syracuse Univeristy, 1983
A. Joseph Warburton, Assistant Professor of Finance
J.D., University of Michigan, 1996; Ph.D., University of Michigan, 2009

David Weinbaum, Associate Professor of Finance Ph.D., New York University, 2002
Johan Wiklund, Professor of Entrepreneurship Ph.D., Jönköping International Business School, 1998

Trent Williams, Assistant Professor of Entrepreneurship
Ph.D. Indiana University, 2014
Raymond M. Wimer, Professor of Retail Practice
M.S., Syracuse University, 1998

David Wo, Visiting Assistant Professor of Management Ph.D., University of Central Florida, 2015

Zhengping Wu, Associate Professor of Supply Chain Management
Ph.D., Purdue University, 2003
Pierre Yourougou, Clinical Associate Professor of Finance
Ph.D., New York University, 1996
Joyce Zadzilka, Professor of Accounting Practice
M.B.A., Syracuse University, 1996

# Maxwell School of Citizenship and Public Affairs 

James B. Steinberg, Dean
200 Eggers Hall
www.maxwell.syr.edu/

# About the School 

James B. Steinberg, Dean<br>200 Eggers Hall

The Maxwell School of Citizenship and Public Affairs was established in 1924 to develop public sector leaders who have strong social science backgrounds and the practical skills required to lead large public organizations. Today the School is the home to six social science academic disciplines, an interdisciplinary doctoral program in social sciences, and two graduate professional degree programs that train public leaders for careers here and abroad.
With its 157 faculty members, 105 staff, 850 graduate students and 1,800 undergraduate majors, Maxwell members produce a significant amount of new knowledge and educate a large number of students to pursue careers in the public and private sectors, as well as careers as researchers and scholars.

For its efforts, Maxwell programs rank highly among their peers because the School attracts talented faculty and students, produces high quality scholarship, and develops already able students into eminent thinkers and analysts.

For a complete listing of faculty associated with the Maxwell School, see the
Faculty section of this catalog.

## Executive Education

Through its executive education program, Maxwell offers several executive degrees, certificates of advanced study, and training programs for students from a number of countries who may study here for a few weeks or up to a year. Maxwell hosts Humphrey Fellows from a large number of countries; and Civic Education Leadership Fellows, Leaders for Democracy Fellows, and Edward R. Murrow Fellows from the Middle East.

Study Abroad

Most students pursuing the International Relations, BA degree take advantage of the Global Program offerings. Many students choose to find internships abroad and may choose to study at one of several overseas centers.

## Undergraduate Majors

Maxwell is home to the social sciences. Its faculty members teach lower-division survey courses in each of the social science disciplines, offer interdisciplinary courses in social sciences, and provide an array of majors and minors in social science areas. Undergraduate degrees are offered in anthropology, economics, geography, history, international relations, political science, policy studies, and sociology.
Students may take multiple majors within the social sciences or pursue additional majors in areas outside of the Maxwell School. Many of our undergraduate programs offer distinction in their majors. Students who graduate with distinction typically are selected for the distinction, conduct research with one or more faculty members, and write a scholarly paper based on their research.

## Maxwell School of Citizenship and Public Affairs Faculty

Lamis Abdelaaty, Assistant Professor, Political Science
Ph.D., Princeton University, 2014 International relations, comparative politics, human rights and humanitarian action, asylum and migration, international organizations and delegation, ethnic politics, research design

Alan Allport, Assistant Professor, History Ph.D., University of Pennsylvania, 2007 Modern British and European history; war and social change; family and children's history
Kristi J. Andersen, Laura J. and L. Douglas Meredith Professor; Maxwell Professor of Teaching Excellence, Political Science Ph.D., University of Chicago, 1976 American politics, political parties, public opinion, women and politics

Douglas V. Armstrong, Laura J. and L. Douglas Meredith Professor of Teaching Excellence; Maxwell Professor of Teaching Excellence, Anthropology
Ph.D., University of California, Los Angeles, 1983
Archaeology of North America, historical archaeology, ethnohistory, Caribbean, North America

Elizabeth Ashby, Assistant Professor, Economics
Ph.D., Syracuse University, 2006
Public finance, labor economics, applied microeconomics, public economics
Shena Ashley, Assistant Professor, Public Administration \& International Affairs Ph.D., Georgia State University, 2007
Nonprofit organizations, evaluation
Badi Baltagi, Distinguished Professor, Economics
Ph.D., University of Pennsylvania, 1979
Applied and theoretical econometrics
William C. Banks, Laura J. and L. Douglas Meredith Professor of Teaching Excellence, Public Administration \& International Affairs and Board of Advisors Distinguished Professor, Law
J.D. University of Denver, 1974

Comparative legal systems, domestic and international terrorism, emerging powers, covert war powers, civil military relations
Michael Barkun, Professor Emeritus, Political Science
Ph.D., Northwestern University, 1965 Millenarian and utopian movements, jurisprudence, international law

Hossein Bashiriyeh, Lecturer, Political Science Ph.D., University of Liverpool (England), 1982 20th Century Political Thought; Democratic Transitions; Thomas Hobbes

Kenneth Baynes, Professor, Philosophy and Political Science (by courtesy)
Ph.D., Boston University, 1987
Social and political philosophy, critical theory, continental philosophy
Jacob Bendix, Associate Professor, Geography Ph.D., University of Georgia, 1992
Biogeography, geomorphology, human impacts on environmental systems, media coverage of environment

David H. Bennett, Laura J. and L. Douglas Meredith Professor of Teaching Excellence, History

Ph.D., University of Chicago, 1963
Political extremism in America, 20th-century American history, modern military history

James P. Bennett, Associate Professor Emeritus, Political Science
Ph.D., Massachusetts Institute of Technology, 1978
International relations, methodology
Catherine A. Bertini, Professor of Practice, Public Administration \& International Affairs B.A., SUNY Albany, 1971

Managing international and humanitarian aid organizations, former Under-SecretaryGeneral for Management at the United Nations; Former Executive Director, World Food Program
Robert Bifulco, Associate Professor Public Administration \& International Affairs Ph.D., Syracuse University, 2001 Public finance, budgeting and financial management

Edwin A. Bock, Professor Emeritus, Public Administration \& International Affairs A.B., Dartmouth College, 1943

Political and administrative leadership; executive politics; national planning; government, mass media, and the arts
Robert C. Bogdan, Distinguished Professor Emeritus, Sociology
Ph.D., Syracuse University, 1971
Qualitative research methods, special education, visual sociology, disability studies
G. Matthew Bonham, Professor, Political Science
Ph.D., Massachusetts Institute of Technology, 1967
International relations, foreign policy decision making, international negotiation, methodology

Susan R. Borker, Associate Professor Emerita, Sociology
Ph.D., University of Chicago, 1971
Quantitative methods, sex and gender roles, labor force issues
Mehrzad Boroujerdi, Professor and Chair, Political Science
Ph.D., American University, 1990
The Middle East, comparative politics, international relations

Susan Branson, Professor, History Ph.D., Northern Illinois University, 1992 U.S. women's history, U.S. social history, U.S. political history

Stuart I. Bretschneider, Laura J. and L. Douglas Meredith Professor of Teaching Excellence, Public Administration \& International Affairs; Director, Center for Technology and Information Policy Ph.D., Ohio State University, 1981 Quantitative methods, information management, computer application and strategic planning

Walter Broadnax, Distinguished Professor, Public Administration \& International Affairs Ph.D., Syracuse University, 1975
Strategic public management, executive leadership
Stuart Brown, Professor of Practice, Public Administration \& International Affairs Ph.D., Columbia University, 1985 International economics, macroeconomics, emerging markets, political economy
Hans C. Buechler, Professor, Anthropology
Ph.D., Columbia University, 1966
Culture change, internal and international migration, urban problems, ethnic identity, ethnic elites, political anthropology, life history methodology, Andes, Latin America, Spain, Switzerland, Central Europe, eastern Germany

John S. Burdick, Professor, Anthropology Ph.D., City University of New York, 1990 Religious movements, politics, gender, medical, African Americans, Brazil, Latin America

Leonard E. Burman, Paul A. Volcker Chair in Economic Policy; Professor of Practice, Public Administration and Economics
Ph.D., University of Minnesota, 1985
Federal tax policy, healthcare and budget reform

Joan N. Burstyn, Professor Emerita, History
Ph.D., University of London, 1968
History of women in British and American education, history of higher education

Kristina Buzard, Assistant Professor, Economics
Ph.D., University of California, San Diego, 2012
International trade, urban economics
Keith J. Bybee, Professor, Political Science
and the Paul E. and the Hon. Joanne F. Alper
'72 Judiciary Studies Professor, Law
Ph.D., University of California, San Diego, 1995
American public law, legal theory, political philosophy, American politics and the politics
of race
Horace Campbell, Professor, Political Science and African American Studies
Ph.D., Sussex University, 1979
Comparative politics of Africa and the Caribbean, African international relations, armaments, culture, pan Africanism, peace studies, political economy
Linda Carty, Associate Professor, African American Studies and Sociology (by courtesy)
Ph.D., University of Toronto, 1989
Race, class, and gender studies; comparative
sociology; international development, postcolonial discourse; Third World feminism
A.H. Peter Castro, Associate Professor,

Anthropology
Ph.D., University of California, Santa Barbara, 1988
Applied anthropology, international development, conflict management, ecology, forestry, agrarian societies, refugees, colonialism, East Africa

Craige B. Champion, Associate Professor, History
Ph.D., Princeton University, 1993
Hellenistic Greece, Greek democracy and republican Rome, ancient imperialism, ethnic identity formation in classical antiquity, the politics of culture in ancient Greece and Rome, classical historiography
Robert Christen, Professor of Practice, Public
Administration and International Affairs
M.S. Ohio State University, 1984

Microfinance, agricultural economics, development finance

Matthew R. Cleary, Associate Professor, Political Science
Ph.D., University of Chicago, 2004
Comparative politics, Latin American politics, comparative political economy

Andrew W. Cohen, Associate Professor, History
Ph.D., University of Chicago, 1999
Legal history, American labor history, 20th
century American history
Elizabeth F. Cohen, Associate Professor, Political Science
Ph.D., Yale University, 2003
Political theory, history of political thought, immigration and citizenship

Goodwin Cooke, Professor of Practice
Emeritus, Political Science
B.A., Harvard University, 1953

Former U.S. Foreign Service Officer, experience in Asia, Europe, Canada, and Africa; ambassador to Central African Republic

William D. Coplin, Laura J. and L. Douglas Meredith Professor of Teaching Excellence, Public Affairs
Ph.D., American University, 1964
International relations, public policy analysis
Francine D'Amico, Part-time Associate
Professor, International Relations
Ph.D., Cornell University, 1989
Latin American politics and international relations

Rafael Fernández de Castro, Jay and Debe Moskowitz Endowed Chair, Public Administration and International Affairs Ph.D., Georgetown University, 1995 Foreign Policy, US-Mexico Relation, InterAmerican Studies

Renéede Nevers, Associate Professor and Vice Chair, Public Administration \& International Affairs and Political Science (by courtesy)
Ph.D., Columbia University, 1992
International security policy, international organizations
Christopher R. DeCorse, Professor, Anthropology
Ph.D., University of California, Los Angeles, 1989
Archaeology, African archaeology and history, archaeology and popular culture, general anthropology

Thomas H. Dennison, Professor of Practice; Co-Director, Masters in Public Health Program; Program Advisor, Health Service Management and Policy (HSMP), Public Administration \& International Affairs Ph.D., Pennsylvania State University, 1987 Health care administration, finance and policy

Albrecht Diem, Associate Professor, History Ph.D., University of Utrecht, 2000 Early Medieval Europe, early Christianity, monasticism

David Kwame Dixon, Assistant Professor, African American Studies and Political Science (by courtesy)
Ph.D., Clark Atlanta University, 1996 International relations, comparative politics and political economy

Dawn Dow, Assistant Professor, Sociology
Ph.D., University of California, Berkeley, 2012 Race/ethnicity, family, intersectionality (race, class, gender), gender, sociology of law, qualitative research methods and theory

Gavan Duffy, Associate Professor, Political Science
Ph.D., Massachusetts Institute of Technology, 1987
Political methodology, political behavior and communication, American politics
William D. Duncombe, Professor, Public
Administration \& International Affairs
Ph.D, Syracuse University, 1989
Public budgeting and finance, quantitative
methods, development administration, education policy and finance

Donald H. Dutkowsky, Professor, Economics
Ph.D., State University of New York at Buffalo, 1982
Macroeconomic, monetary theory and policy, applied econometrics

Michael R. Ebner, Associate Professor and Chair, History
Ph.D., Columbia University, 2004
History of modern Europe, Italy, Fascism, and political violence
Samuel Eddy, Professor Emeritus, History
Ph.D., University of Michigan, 1958
Classical, Greece and Rome
Colin Elman, Associate Professor, Political Science; Director, Center for Qualitative and
Multi-Method Inquiry
Ph.D., Columbia University, 1999
International relations theory, qualitative research methods

Miriam Fendius Elman, Associate Professor, Political Science
Ph.D., Columbia University, 1996
International security, democracy, politics of the Middle East

Gary V. Engelhardt, Professor, Melvin A. Eggers Faculty Scholar, Faculty Associate, Aging Studies Institute, Economics
Ph.D., Massachusetts Institute of Technology, 1993
Housing economics, public finance, tax policy, public economics, labor economics

Margarita Estévez-Abe, Associate Professor, Political Science
Ph.D., Harvard University, 1999
Comparative politics, political economy, gender, and Japan

Jerry Evensky, Laura J. and L. Douglas Meredith Professor for Teaching Excellence, Economics
Ph.D., Syracuse University, 1984
History of economic thought, labor economics, philosophy of economics (methodology), economic education

Cissie C. Fairchilds, Professor Emerita, History Ph.D., Johns Hopkins University, 1972
European social history, early modern France, women's history

Christopher G. Faricy, Assistant Professor, Political Science
Ph.D., University of North Carolina at Chapel Hill, 2010
American politics, public policy, economic inequality

Carol Faulkner, Professor, History
Ph.D., Binghamton University, 1998
19th century American history, slavery
Michael A. Flusche, Associate Professor Emeritus, History
Ph.D., Johns Hopkins University, 1973
American Civil War and Reconstruction, American South

Shana Gadarian, Assistant Professor, Political Science
Ph.D., Princeton University, 2008
American politics and political
communication, political behavior, political
psychology, research methods and public health

Peng Gao, Associate Professor, Geography Ph.D., University of Buffalo, 2003
Geographic information systems modeling, human impacts on physical environments, fluvial systems

Jeffrey Gonda, Assistant Professor, History Ph.D., Yale University, 2012
20th-century American politics and society,
U.S. race and rights, U.S. urban

Cecilia A. Green, Associate Professor, Sociology
Ph.D., University of Toronto, 1998
Historical sociology, Caribbean, race/class/ gender, globalization

Vernon L. Greene, Professor and Chair Social Science Ph.D., Public Administration \& International Affairs
Ph.D., Indiana University, 1978
Political theory, citizenship, program
evaluation, quantitative methods
Dimitar D. Gueorguiev, Assistant Professor,

Political Science
Ph.D., University of California at San Diego, 2014
Chinese politics, developing economies, authoritarian institutions, governance, corruption, public participation, program design and evaluation

Paul M. Hagenloh, Associate Professor, History
Ph.D., University of Texas, Austin, 1999
Modern Russia/Soviet Union: Modern dictatorships, history of policing, genocide, critical theory

Sarah Hammersma, Associate Professor, Public Administration and International Affairs
Ph.D. University of Wisconsin, Madison, 2004
Public economics, labor economics, applied microeconomics

Madonna Harrington Meyer, Laura J. and L. Douglas Meredith Professor for Teaching Excellence, Sociology
Ph.D., Florida State University, 1991
Aging, health care, gender policy
Margaret Hermann, Gerald B. and Daphna
Cramer Professor of Global Affairs; Professor, Political Science; Director, Moynihan Institute of Global Affairs
Ph.D., Northwestern University, 1965
Political leadership, political psychology,
foreign policy decision making, comparative
foreign policy
Samantha Kahn Herrick, Associate Professor, History
Ph.D., Harvard University, 2002
Medieval European history, Christian hagiography and apostolic legends, memory, power

William Horrace, Professor and Chair, Melvin A. Eggers Economics Faculty Scholar, Economics
Ph.D., Michigan State University, 1996
Theoretical and applied econometrics, spatial econometrics

Yilin Hou, Professor, Public Administration \& International Affairs
Ph.D. Syracuse University, 2002
Public budgeting and finance
Azra Hromadzic, Assistant Professor, Anthropology
Ph.D. University of Pennsylvania, 2009
Political anthropology; ethno-political
violence and post-conflict reconciliation; socialism and post-socialism; gender; youth
cultural practices; comparative education; aging, care, and responsibility; and the Balkans

Matthew Huber, Assistant Professor, Geography
Ph.D. Clark University, 2009
Political economy, historical geography, energy and capitalism, oil, resource governance and social theory
Hugo B. Jales, Assistant Professor, Economics
Ph.D. University of British Columbia, 2015
Labor economics, econometrics
Seth Jolly, Associate Professor, Political Science
Ph.D., Duke University, 2006
European Union, democratic institutions, comparative and international political economy, political parties, ethnic conflict, race and politics, political methodology

Amy Kallander, Associate Professor, History
Ph.D., University of California, Berkeley, 2007
Modern Middle East
George Kallander, Associate Professor, History
Ph.D., Columbia University, 2006
Korean and northeast Asian history and culture

Chihwa (Duke) Kao, Professor, Economics
Ph.D., State University of New York at Stony Brook, 1983
Econometrics, statistics, mathematical economics

Leyla Karakas, Assistant Professor, Economics
Ph.D., Johns Hopkins University, 2014
Political economy, game theory, applied microeconomics, public economics
Neil Katz, Associate Professor Emeritus, Public Affairs
Ph.D., University of Maryland, 1974
Nonviolent conflict and change, conflict resolution, modern American peace movements

Thomas M. Keck, Associate Professor and Michael 0. Sawyer Chair in Constitutional Law and Politics
Ph.D., Rutgers University, 1999
Supreme Court, American constitutional development

Jerry S. Kelly, Distinguished Professor, Economics
Ph.D., Harvard University, 1969
Social choice, econometric theory,
microeconomic theory
Ralph Ketcham, Maxwell Professor Emeritus of Citizenship and Public Affairs; History, Public Affairs, and Political Science
Ph.D., Syracuse University, 1956
American political thought, era of American
Revolution, public policy, comparative political cultures, comparative political theory, American intellectual history

Osamah F. Khalil, Assistant Professor, History Ph.D., University of California, Berkeley, 2011
U.S. Foreign Policy and the origins and expansion of Middle East studies
Audie Klotz, Professor, Political Science Ph.D., Cornell University, 1991 International relations, transnational actors and activism

Thomas J. Kniesner, Krisher Professor Emeritus, Economics
Ph.D., Ohio State University, 1974
Labor economics, health economics
Natalie Koch, Assistant Professor, Geography Ph.D., University of Colorado, Boulder, 2012
Political geography, urban space, citizenship
and nationalism in Central Asia and the
Persian Gulf
Louis Kriesberg, Maxwell Professor Emeritus, Sociology
Ph.D., University of Chicago, 1953
World conflicts, conflict resolution, race/
ethnic/minority relations
Jeffrey D. Kubik, Associate Professor, Economics
Ph.D., Massachusetts Institute of Technology, 1997
Labor economics, public finance
Radha Kumar, Assistant Professor, History
Ph.D., Princeton University, 2014
Modern South Asia, Urban History, Caste in India
Prema Kurien, Professor, Sociology
Ph.D., Brown University, 1993
International migration and immigration, sociology of religion, race and ethnicity, religion and society in India

Norman A. Kutcher, Laura J. and L. Douglas
Meredith Professor of Teaching Excellence, History
J.D., Boston College, 1985; Ph.D., Yale

University, 1991
Cultural, social, and intellectual history of China

Chris Kyle, Associate Professor, History
Ph.D., Aukland University, 1994
Toponomology, society, law and culture of Westminster and London, the social history of Parliaments in early modern Britain

Derek Laing, Associate Professor, Economics Ph.D., University of Essex, United Kingdom, 1990
Macroeconomics, monetary theory, labor economics, industrial organization
W. Henry Lambright, Professor, Political

Science and Public Administration \& International Affairs
Ph.D., Columbia University, 1966
Science, technology, and public policy; energy, environment, and resources policy; technology and politics; bureaucratic politics

Elisabeth D. Lasch-Quinn, Professor, History Ph.D., University of Massachusetts, Amherst, 1990
Modern American social, cultural, intellectual history; social/political thought; cultural criticism; public philosophy; ethics; democracy; civil society; race; family

Jesse D. Lecy, Assistant Professor, Public Administration and International Affairs Ph.D., Syracuse University, 2010
Non-profit organizations, urban policy
Yoonseok Lee, Assistant Professor, Economics Ph.D., Yale University, 2006
Econometric theory, emiparametric/nonlinear (dynamic) panel data models, many (weak) instrument problem, high dimensional models, social interaction and spatial dependence

Andrew Lipman, Assistant Professor, History Ph.D., University of Pennsylvania, 2010 Colonial North American and U.S. to 1877, Native Americans, Early American material cultures

Chung-Chin (Eugene) Liu, Assistant Professor, Economics
Ph.D., Syracuse University, 2006
Economic development, labor economics, international economics, immigration
Richard R. Loder, Part-time Professor of Sociology
Ph.D., Syracuse University, 1978
race and ethnicity, social process and social change, federal Indian policy and identity, Native American Studies

Andrew S. London, Professor, Sociology Ph.D., University of Pennsylvania, 1993

Health and health care, demography, families, HIV/AIDS, carework, poverty, veterans, aging and the life course, LGBT Studies

Leonard Lopoo, Associate Professor, Public
Administration \& International Affairs;
Director, Center for Policy Research
Ph.D., Chicago, 2001
Poverty economic geography, child and family policy

Julia Loughlin, Professor Emeritus, Sociology Ph.D., Columbia University, 1971
Sex and gender roles, race/ethnic/minority
relations, science and technology
Mary E. Lovely, Chair of International Relations (Undergraduate); Professor, Economics
Ph.D., University of Michigan, 1989 International economics, public finance, labor economics

Amy Lutz, Associate Professor, Sociology Ph.D., SUNY Albany, 2002
Race, ethnicity, stratification, political sociology, Latin American/Latino studies

Yingyi Ma, Associate Professor, Sociology
Ph.D., Johns Hopkins, 2006
Social stratification and social inequality, sociology of education, immigration, quantitative methods

Robin P. Malloy, E.I. White Chair and Distinguished Professor of Law and Professor, Economics (by courtesy)
J.D., University of Florida, 1980; LL.M., Illinois, 1983
Real estate transactions, law and economics, land use and development, property

William P. Mangin, Professor Emeritus, Anthropology
Ph.D., Yale University, 1954
Urban, race and ethnicity, applied qualitative methods; Peru, United States, Spain
Laurie Marhoefer, Assistant Professor, History
Ph.D., Rutgers University, 2008
Modern European history (Germany), gender history

Frederick D. Marquardt, Assistant Professor Emeritus, Maxwell Professor of Teaching Excellence, History
Ph.D., University of California, Berkeley, 1973
German and European social history
Peter T. Marsh, Professor Emeritus, History
Ph.D., University of Cambridge, 1962
19th/20th century Britain, international
political economy
Allan C. Mazur, Professor, Public Affairs
Ph.D., Johns Hopkins University, 1969
Biosociology, sciences and technology
Robert D. McClure, Chapple Family Professor Emeritus; Professor Emeritus, Political
Science and Public Affairs
Ph.D., Indiana University, 1969
American politics, leadership, mass communication
Gladys McCormick, Assistant Professor, History
Ph.D., University of Wisconsin, 2009
Latin America and the Caribbean, 19th- and 20th-century Mexico

Daniel McDowell, Assistant Professor, Political Science
Ph.D., University of Virginia, 2012
International relations, international political economy, international financial institutions
John G. McPeak, Professor, Public
Administration \& International Affairs
Ph.D., Wisconsin, 1999
Development economics, natural resource economics, African agricultural development
Donald Meinig, Professor Emeritus, Geography
Ph.D., University of Washington, 1953
Cultural and historical geography of North America

John Mercer, Professor Emeritus, Geography
Ph.D., McMaster University, 1971
Urban and political geography, housing, comparative studies
Ines A. Mergel, Associate Professor, Public
Administration \& International Affairs
D.B.A., University of St. Gallen, 2005

Information management, social network analysis
Susan W. Millar, Associate Professor, Geography
Ph.D., Rutgers University, 1995
Physical geography, periglacial geomorphology, arctic science, climate change

Jerry Miner, Professor Emeritus, Economics Ph.D., University of Michigan, 1958
Public economics, human resources economics

Don Mitchell, Distinguished Professor, Geography
Ph.D., Rutgers University, 1992

Cultural, political economy of landscape, social theory, labor, geographies of power and marginalization, Marxism

Devashish Mitra, Professor; Gerald B. and Daphna Cramer Professor of Global Affairs, Economics
Ph.D., Columbia University, 1996
International trade, political economy, development economics

Chandra Talpade Mohanty, Professor and Chair, Women's and Gender Studies Department, Sociology
Ph.D., University of Illinois at UrbanaChampaign, 1987
Transnational feminist theory, post-colonial feminism, globalization and anti-capitalist praxis, the politics of knowledge, and antiracist education

Mark Monmonier, Distinguished Professor, Geography
Ph.D., Pennsylvania State University, 1969
Geographic information (technology, policy, and societal role), cartographic communication and map design, history of cartography in the 20th century, environmental mapping

Jennifer Montez, Assistant Professor, Sociology
Ph.D., University of Texas at Austin, 2011
Life course and aging, social demography, medical sociology
Glyn Morgan, Associate Professor, Political Science
Ph.D., University of California at Berkeley, 2001
Modern political theory, European Union and religion in public life

Anne E. Mosher, Associate Professor, Geography
Ph.D., Pennsylvania State University, 1989 Historical geography of North America, urban and urban historical geography, research methods in historical geography, interdisciplinary theories of space and place
Robert Murrett, Professor of Practice, Public
Administration \& International Affairs
M.A., Georgetown University and M.A.,

Defense Intelligence College
Intelligence, national security, military strategy
Piyusha Mutreja, Assistant Professor, Economics
Ph.D., University of Iowa, 2010
International economics, economics
development, macroeconomics
Tina Nabatchi, Associate Professor, Public
Administration \& International Affairs Ph.D., Indiana University, 2007
Deliberative democracy, alternative dispute resolution in the federal government

James Newman, Professor Emeritus, Geography
Ph.D., University of Minnesota, 1968
Population and settlement geography, diet and nutrition, human geography of Africa, prehistory
Shannon A. Novak, Associate Professor, Anthropology
Ph.D., University of Utah, 1999
Bioarchaeology, ethnohistory, gender, political violence, materiality of the body, North America

Inge O'Connor, Assistant Professor, Economics
Ph.D., Syracuse University, 1996
Public economics, labor economics
Sean O'Keefe, University Professor and Howard G. and S. Louise Phanstiel Chair in Strategic Management and Leadership, Public Administration and International Affairs
M.P.A., Syracuse University, 1978 Public management, national security policy and strategy, public finance and public budgeting, financial management, technology development and innovation management, executive leadership

Rosemary O'Leary, Professor Emeritus, Public Administration and International Affairs
J.D. University of Kansas, 1981; Ph.D.

Syracuse University, 1988
Public management, environmental policy, dispute resolution, law
Jan Ivar Ondrich, Professor, Economics
Ph.D., University of Wisconsin, 1983
Econometrics, labor economics, urban economics
Jackie Orr, Associate Professor, Sociology Ph.D., University of California, Berkeley, 1999 Contemporary theory, sociology of science, technology and medicine, gender studies

John L. Palmer, University Professor and Dean Emeritus, Public Administration \& International Affairs and Economics
Ph.D., Stanford University, 1970
Public management and public policy, social welfare policy

Arthur Paris, Associate Professor, Sociology Ph.D., Northwestern University, 1974 Urban sociology; race/ethnic/minority relations;science and technology

Deborah Pellow, Professor, Anthropology Ph.D., Northwestern University, 1974 Gender, ethnicity, urban society, anthropology of space and place, Africa
Thomas Perreault, Professor, Geography
Ph.D., University of Colorado, 2000
Political ecology, environment and development, social movements, indigenous resource use, Latin America
Rebecca Peters, Assistant Professor, Public
Administration \& International Affairs
(Anthropology by courtesy)
Ph.D., Brown University, 2011
Lusophone Africa; International Development, especially the cultures of nongovernmental health organizations; Globalization; Medical Anthropology, especially the study of reproductive health; Anthropology of Science and Medicine.

Guido Pezzarossi, Assistant Professor, Anthropology
Ph.D,, Stanford University, 2014
Archaeology of colonialism, historical archaeology, Guatemala, New England, postcolonial theory, materiality, foodways
Spencer Piston, Assistant Professor, Political Science
Ph.D., University of Michigan, 2014
Race, public opinion and political behavior, politics of inequality
William S. Pooler, Associate Professor
Emeritus, Sociology
Ph.D., University of Michigan, 1971
Quantitative methodology, family, criminal justice
David C. Popp, Professor, Public
Administration \& International Affairs
Ph.D., Yale University, 1997
Environmental economics, economics of technological change, public finance
Sarah B. Pralle, Associate Professor, Political Science
Ph.D., University of Washington, Seattle, 2001
Public policy processes
James E. Price, Associate Professor Emeritus, Economics
Ph.D., Massachusetts Institute of Technology, 1963

Macroeconomics, international trade
Gretchen Purser, Assistant Professor, Sociology
Ph.D., University of California at Berkeley, 2009
Work and labor markets, urban poverty, punishment and ethnography

Richard Ratcliff, Professor Emeritus, Sociology
Ph.D., University of Wisconsin - Madison Political economy, stratification/mobility, conflict resolution, social theory, research methods

Jane M. Read, Associate Professor, Geography
Louisiana State University, 1999
Geographic information systems and remote sensing, human-environment interactions, tropical environments, Latin America

Grant D. Reeher, Professor, Political Science; Director, Campbell Institute
Ph.D., Yale University, 1992
American politics, American political theory, political philosophy
J. David Richardson, Professor Emeritus, Economics
Ph.D., University of Michigan, 1970
International economics, trade policy
David J. Robinson, Dellplain Professor of Latin American Geography, Geography Ph.D., London University, 1967
Latin America, historical development, Internet

Jonnell Robinson, Assistant Professor, Geography
Ph.D., University of North Carolina, 2010
Community geography, participatory
geographic information systems (GIS)
Lars Rodseth, Associate Professor, Anthropology
Ph.D., University of Michigan, 1993
History of the human sciences, social and evolutionary theory, kinship, nationalism, violence, ideology, religion; South Asia, Tibet, United States

Dennis Romano, Dr. Walter Montgomery and Marian Gruber Professor of History, History Ph.D., Michigan State University, 1981 Renaissance Italy, early modern social and cultural history, Venice

Stuart S. Rosenthal, Maxwell Advisory Board Professor, Economics
Ph.D., University of Wisconsin, 1986

Urban economics, housing economics, real estate finance, public economics

Robert A. Rubinstein, Professor, Anthropology and International Relations
Ph.D., State University of New York at Binghamton, 1977; Ms.PH, School of Public Health, University of Illinois, Chicago, 1983
Global health, urban health, peace and conflict, negotiation, peacekeeping, the Middle East

Mark Rupert, Professor, Chapple Family Professor of Citizenship and Democracy; Political Science
Ph.D., Claremont Graduate School, 1988 International relations

Tod D. Rutherford, Professor, Geography Ph.D., University of Wales, 1992 Economic restructuring, labor and the automobile industry, labor market processes and policies, regional development

Anoop Sadanandan, Assistant Professor, Political Science
Ph.D., Duke University, 2011
Comparative politics, political economy, political and economic development, institutions, political parties, ethnic politics, developing countries and India
S.N. Sangmpam, Professor, African American

Studies and Political Science
Ph.D., University of Chicago, 1984
Comparative politics, Panafricanism, African
American politics
Rebecca Schewe, Assistant Professor, Sociology
Ph.D., University of Wisconsin-Madison, 2011
Environmental and natural resource
sociology, food and agriculture, rural sociology

Mark G. Schmeller, Associate Professor, History
Ph.D., University of Chicago, 2001
18th and 19th century American intellectual, political and legal history
Sabina Schnell, Assistant Professor, Public Administration and International Affairs Ph.D., The George Washington University, 2014
International management and governance, Eastern Europe

Larry Schroeder, Professor Emeritus, Public
Administration \& International Affairs
Ph.D., Wisconsin University, 1971
Public sector economics, quantitative
methods, financial management in local governments and developing countries

Amy Ellen Schwartz, Daniel Patrick Moynihan Professor of Public Affairs, Professor of Public Administration and International Affairs and Economics
Ph.D., Columbia University, 1989
Urban policy, education policy and public finance

Maureen Trudelle Schwarz, Professor, Anthropology
Ph.D., University of Washington, 1995
Native North America, Navajo, Museum
Studies, issues of representation, indigenous
manipulation of stereotypes, notions of
personhood, notions of whiteness, medical and religious pluralism, indigenous justice systems

Milton Sernett, Professor Emeritus, History and African American Studies
Ph.D., University of Delaware, 1972
African American religious history, slavery and abolition

Yüksel Sezgin, Assistant Professor Ph.D., University of Washington, 2007 Comparative politics, law and courts, the middle east, religion, human rights
Martin S. Shanguhyia, Assistant Professor, History
Ph.D., West Virginia University, 2007
Colonial and post-colonial Africa; African
political, economic and cultural history;
African environment and sustainability
James Roger Sharp, Professor Emeritus, History
Ph.D., University of California, Berkeley, 1966
American political history, early national and
middle period, 1789-1860
Abdulaziz Shifa, Assistant Professor, Economics
Ph.D., Stockholm University, 2013
Macroeconomics, development and political economy

Merril Silverstein, Marjorie Cantor Professor of Aging Studies
Ph.D., Columbia University, 1990
Intergenerational relations, social support,
caregiving policy, migration in later life, and
international views on aging families
Perry Singleton, Assistant Professor, Economics
Ph.D., University of Maryland, 2007
Public finance, health economics, labor
economics, applied microeconomics
Theresa A. Singleton, Associate Professor, Anthropology
Ph.D., University of Florida, 1980
Historical archaeology, African American
history and culture, slavery in plantation America

Gary Spencer, Professor Emeritus, Sociology Ph.D. Boston, 1970
Dramaturgy, prejudice and discrimination, ethnicity

David H. Stam, University Librarian Emeritus and Senior Scholar, History
Ph.D., Northwestern University
Library history, bank history, 19th-century
British studies, historiography
James B. Steinberg, Dean and University Professor
J.D., Yale University

Public affairs, foreign policy and national security

Jeffrey M. Stonecash, Maxwell Professor
Emeritus, Political Science
Ph.D., Northwestern University, 1975
Political parties, intergovernmental relations, state politics
Farhana Sultana, Associate Professor, Geography
Ph.D., University of Minnesota, 2007
Political ecology, development theory, water resources management

Junko Takeda, Associate Professor, History
Ph.D., Stanford University, 2006
Modern European history
Brian D. Taylor, Professor, Political Science
Ph.D., Massachusetts Institute of Technology, 1998
Comparative politics, Russian politics
Laurence Thomas, Professor, Political Science and Philosophy
Ph.D., University of Pittsburgh, 1976
Political theory, foundations of moral character

Margaret Susan Thompson, Associate Professor, History and Political Science Ph.D., University of Wisconsin, 1979 Modern American history, government and politics, religion, women's history
Danielle M. Thomsen, Assistant Professor, Political Science
Ph.D., Cornell University, 2014
American politics, political parties,
campaigns and elections, Congress, partisan polarization, gender and politics

Stuart J. Thorson, Donald P. and Margaret Curry Gregg Professor; International Relations and Political Science Ph.D., University of Minnesota, 1972 International relations, political theory and methodology

John Marshall Townsend, Professor, Anthropology
Ph.D., University of California, Santa Barbara, 1972
Medical and psychological anthropology, theory and methodology, cross-cultural mental health, human sexuality, ethnic relations, symbolic interaction, United States, Germany
A. Dale Tussing, Professor Emeritus, Economics
Ph.D., Syracuse University, 1964
Health economics, poverty, Marxian economics

Cecilia Van Hollen, Associate Professor, Anthropology
Ph.D., University of California, Berkeley and San Francisco, 1998
Cultural and medical anthropology, reproductive health, gender; South Asia
David Van Slyke, Associate Dean and Chair and Louis A. Bantle Chair in Business and Government Policy, Professor, Public Administration \& International Affairs Ph.D., SUNY Albany, 1999
Public administration and organizations, public policy process, strategic management, philanthropy, and charitable giving
Susan S. Wadley, Ford-Maxwell Professor of South Asian Studies, Anthropology
Ph.D., University of Chicago, 1973
Social change, demography, religion, folklore, performance studies, gender issues, India

Michael Wasylenko, Senior Associate Dean and Professor, Economics
Ph.D., Syracuse University, 1975
Public finance, public finance in developing countries, urban economics
Stephen S. Webb, Professor Emeritus, History Ph.D., University of Wisconsin, 1965 Early American and Anglo-American history, the Iroquois

John C. Western, Professor, Geography Ph.D., University of California, Los Angeles, 1978

Social, cultural, urban geography; Southern Africa, Europe

Peter J. Wilcoxen, Associate Professor, Public Administration \& International Affairs
Ph.D., Harvard University, 1989
Environmental economics, natural resource economics

Janet Wilmoth, Professor, Sociology; Director, Aging Studies Institute
Ph.D., Pennsylvania State University, 1995
Sociology of aging and the life course, demography, health
Robert M. Wilson, Associate Professor, Geography
Ph.D., University of British Columbia, 2003 Environmental historical geography, western United States and Canada, environmental policy

Jamie L. Winders, Associate Professor and Chair, Geography
Ph.D., University of Kentucky, 2004
Urban and social geography, race/ethnicity, gender, migration, North America, identity theorizations, U.S. South, qualitative and historical research methods, social theory
Douglas A. Wolf, Gerald B. Cramer Professor of Aging Studies, Public Administration \& International Affairs
Ph.D., University of Pennsylvania, 1977
Aging policy, population studies, quantitative methods

John M. Yinger, Trustee Professor, Public Administration \& International Affairs and Economics
Ph.D., Princeton University, 1974
Urban economics, state and local
government finance, housing

## S.I. Newhouse School of Public Communications

Lorraine Branham, Dean
400 Newhouse I
newhouse.syr.edu

## About the College

The S.I. Newhouse School of Public Communications is widely regarded as one of the nation's top schools of communications. Engaged in industry partnerships and ongoing curricular development, the scope of the S.I. Newhouse School of Public Communications reaches beyond the confines of the classroom. The school prepares students and faculty alike to take a leadership role in addressing the issues of today's rapidly changing media landscape.

The Newhouse School claims a distinguished faculty with a broad range of expertise which is supplemented by visiting communications professionals, regularly bringing new experiences to the classroom. Students study in a modern, threebuilding complex, which houses multimedia labs, television and photography studios, and sound production and recording facilities. Students are supported in their professional development by the Tina Press and David Rubin Career Development Center which serves students who are engaged in public communications studies and helps them make professional connections and find internships, as well as professional positions. http://newhouse.syr.edu/Career_Development_ Center/students/services/index.cfm
Upon graduation, students join the ranks of Newhouse alums, a large and robust group of communications professionals influencing all aspects of the industry. The Career Development Center encourages networking among alums and between students and alums, supporting their continued involvement in the Newhouse School.

The S.I. Newhouse School embraces every known form of public communications offering a rich variety of undergraduate and graduate programs. You'll find more information about the graduate programs in the Graduate Course Catalog.

## Undergraduate:

Bachelor of Science in Advertising
Bachelor of Science in Broadcast and Digital Journalism

Bachelor of Science in Graphic Design
Bachelor of Science in Magazine
Bachelor of Science in Newspaper and Online Journalism

Bachelor of Science in Photography
Bachelor of Science in Public Relations
Bachelor of Science in Television, Radio and Film

## Graduate: Master's Level

Certificate of Advanced Study in Media and Education

Master of Arts in Advertising
Master of Arts in Arts Journalism
Master of Arts in Audio Arts
Master of Science in Broadcast and Digital Journalism

Master of Science in Communications
Master of Science in Communications Management

Master of Science in Computational Journalism
Master of Arts in Documentary Film and History
Master of Arts in Magazine, Newspaper, and Online Journalism

Master of Arts in Media and Education
Master of Science in New Media Management
Master of Arts in Media Studies
Master of Science in Photography
Dual Masters' Programs in Public Diplomacy (M.S in Public Relations and M.A in International Relations)

Master of Science Program in Public Relations
Master of Arts in Television, Radio and Film

## Graduate: Doctoral Level

Ph. D. in Mass Communications

## Minors

Communications Photography
Public Communications Studies

## Educational Mission

The S. I. Newhouse School of Public Communications' mission is to educate ethical, visionary communicators whose goal is to establish an open marketplace of ideas guided by the First Amendment using contemporary professional practices. In the course of earning their degree, students are expected to achieve the following educational outcomes:
Demonstrate strong writing ability.
Demonstrate the ability to construct and tell a story effectively in spoken words, images, text and through multi-media.
Understand and make use of information
technology, and grasp its import for society.
Understand effective visual language and how to apply it to create visual messages and enhance communications.

Understand the events and issues of the day in public communications and society in an environment both encouraged and deepened by the liberal arts experience.

Think analytically, gain numerical proficiency and learn to develop well-researched positions on issues.

Demonstrate knowledge of the historical traditions in public communications and of industry practices and products.

Demonstrate a knowledge of ethical practice in the communications field, along with an understanding of the responsibilities media practitioners have for the public welfare.

Demonstrate an understanding of the First Amendment freedoms of speech and press along with a commitment to using these freedoms in the service of democracy.

Demonstrate the ability to work within a team under deadline pressure.

Develop the knowledge to compare and contrast media systems around the world.
Learn to value, embrace and support diversity in society and the media.

Learn to access, evaluate, synthesize and make use of information in the creation of media products.

Become media literate and a critical consumer of media content.

## Accreditation

The S.I. Newhouse School of Public Communications is accredited by the Accrediting Council on Education in Journalism and Mass Communications, and the School is a member of the Association of Schools of Journalism and Mass Communications.

## Undergraduate

 EducationLorraine Branham, Dean

## Degree Program Overview

The S.I. Newhouse School of Public Communications offers programs of study that lead to the B.S. degree. Students enrolled in the dual program with the College of Arts and Sciences are granted the degree appropriate to the arts and sciences program of study, either the B.A. or the B.S. Students enrolled in the dual
program with the School of Management or with the School of Information Studies also earn the B.S. degree.

Professional coursework in communications may be taken in advertising; broadcast and digital journalism; graphic design; magazine; newspaper and online journalism; photography; public relations; and television, radio and film.

Broad scholarship is stressed in all the programs to ensure that students attain the background necessary for serving in leadership roles in public communications.

All work prepared for classes in the school must be written electronically. Students are encouraged to bring a computer to campus for use in word processing, e-mail, Internet searches, and graphic, multimedia, and photographic presentations.

Public communications students at Syracuse University, as at all accredited schools of public communications, receive a broad education in completing their degree requirements, devoting more than two-thirds of their study to areas other than communications, and earning a minimum of 65 credits in the liberal arts and sciences. Thirtyeight of the 122 credits required for graduation may be taken within the Newhouse School.

## Graduation Requirements

For academic rules and regulations that apply to all Syracuse University students, see the Academic Rules section of the Course Catalog, which also contains special regulations that apply to all students matriculated in the S.I. Newhouse School of Public Communications. In addition, the following rules and regulations apply to students in the S.I. Newhouse School of Public Communications.

In addition to meeting all general University requirements for graduation, students must complete a minimum of 122 credits of coursework, of which 30 must be taken in residence at Syracuse University. All students must take a minimum of 30 credits in public communications courses.

## Single Enrollment Graduation Requirements

Students who are singly enrolled in the Newhouse School of Public Communications must satisfy the general requirements of the professional major program they are pursuing. In addition, non-public communications requirements assure a broad education, and a minor or an area of specialization provides special competency in a selected field of study outside the School of Public Communications.

## Singly enrolled students must:

Fulfill 65 credits in the College of Arts and Sciences.

Complete the following general skills requirements:
first semester writing course;
two courses in foreign languages;
one course in quantitative skills from the following list: MAT 121, MAT 183, MAT 221, or STT 101;
one additional skills course in foreign languages, quantitative skills, speech, or computer skills.
Courses approved for this requirement include: any 3 to 4 credit foreign language course, ACC 151, ACC 201, CIS 252, CPS 181, CPS 196, IST 195, CRS 225, CRS 325, GEO 386 , MAS 261, MAT 122, MAT 221, MAT 222, MAX 201, PSY 252, and SWK 361;
two writing intensive courses from an approved list. (See The College of Arts and Sciences Core Requirement for listing of writing intensive courses.)

Complete the following divisional requirements:
two courses ( 6 credits) in social sciences
two courses ( 6 credits) in humanities;
two courses ( 6 to 8 credits) in natural sciences and mathematics;
four additional courses (12 to 16 credits) from any of the three areas listed above.
All courses fulfilling divisional requirements must be from the Divisional Lists included in the Newhouse School Fact Book 2015-2016. For updated information, check with the Newhouse Undergraduate Advising and Records Office, 315-443-4722. The Fact Book can be found at http:// newhouse.syr.edu/my-newhouse/undergraduate-advising/fact-books
Complete the requirements of one major plan of study in the Newhouse School of Public Communications. Up to 38 credits in Newhouse may be counted in the 122 credits needed for graduation.

Complete a minor or an area of specialization comprising at least 18 credits in a single department in a school or college other than public communications. At least 12 of these credits must be in upper-division courses. This minor or area of specialization may include courses taken to fulfill requirements other than the major. A complete list of minors offered by Syracuse University can be found in the Course Catalog. The minors in Public Communications Studies and in Communications Photography are intended for students who are not enrolled in the Newhouse School.

Complete enough credits in electives to total 122 credits, which are required for graduation. These electives may be taken in any school or college
within the University. No more than four credits may be in physical education.

## Dual Enrollment Graduation Requirements

Students dually enrolled in the Newhouse School of Public Communications and another school or college within the University must fulfill the degree requirements of both schools. Upon graduating, they receive a bachelor's degree (one diploma) conferred jointly by the two schools.

Formal dual programs of study are available in cooperation with the College of Arts and Sciences, the School of Information Studies, and the Martin J. Whitman School of Management.

## Admission to Major Programs

Students must declare a major program of study before the end of the sophomore year. Students majoring in photography or graphic design may need a minimum of five semesters on Main Campus to complete the major; other majors require a minimum of four semesters on Main Campus. Admission to the creative emphasis in advertising is based upon a student receiving a grade of $\mathrm{B}+$ or better in ADV 401 and upon a positive committee review of a portfolio.

## Intra-University Transfer

To be eligible for internal transfer into the Newhouse School of Public Communications, Syracuse University students must have earned at least 30 credits in courses graded A-F at Syracuse before transferring. Admission is based upon a student's cumulative Syracuse GPA, which includes all SU courses. The GPA required for admission varies each semester depending upon the number of spaces available and the number and strength of the applicants. Students must complete the necessary paperwork no later than the last day of classes of the sophomore year. Students are admitted twice each year. Application deadlines are December 15 and
May 1. Applications must be turned in to 316 Newhouse 3, the Newhouse Undergraduate Advising and Records Office. Students wishing to major in photography or graphic design may need a minimum of five semesters on Main Campus to complete this major.

## Transfer Credit

The Newhouse School accepts a maximum of 12 transfer credits in communications. Transfer credit in communications must be judged applicable to the student's major to be acceptable, in addition to meeting general University criteria for transfer credit.

## Study Abroad

London, a world center for communications, has a special appeal for public communications students. The SU center in London offers courses in communications law, photojournalism, television, radio and film, as well two courses on diversity in the media, and special topic courses. The programs offered abroad are intended for third-year students who have completed introductory courses. The Graphic Design and Photography majors allow for study abroad in the fall of senior year.

Public communications students who participate in the London program may take three or six credits in their major area of study. The balance of the academic program consists of courses selected from other components of the program in London, including Arts and Sciences and Management.

Also, through Syracuse University Abroad, the Newhouse School of Public Communications offers public communications courses in Beijing, China; Madrid, Spain, and Strasbourg, France. In addition, students in Madrid may select from courses offered in anthropology, history, economics, political science, religion, psychology, history of art, sociology, management, and Spanish language and literature, and women's studies. Those fluent in Spanish may do part of their coursework at the Autónoma University of Madrid. In Strasbourg, students may choose from courses in economics, history of art, French language and literature, history, philosophy, political science, and religion. Those fluent in French may do part of their coursework at the University of Strasbourg.
Students who do not need to take a communications course during their semester abroad also have the option of studying in Santiago, Chile; Florence, Italy; Hong Kong, China; Istanbul, Turkey; or in fall 2015 and 2016, Wroclaw, Poland. Direct enrollment in foreign universities and affiliated programs is available in multiple locations in Africa, Asia, Australia, Europe, the Middle East, Latin America and the Caribbean.

In addition to studying abroad during the fall or spring semesters, students may also choose from a variety of summer programs offered through SU Abroad, as well as main campus courses which include a short-term abroad experience as part of the course.
Further information can be found at http:// suabroad.syr.edu, or contact Syracuse University Abroad, 106 Walnut Place, 315-443-3471.

## Study in Los Angeles

Students in the S.I. Newhouse School of Public Communications have the opportunity to study for a semester in Los Angeles. This program, which
focuses on the entertainment industry, is open to all students, but particularly accommodates students who are majoring in Television, Radio and Film. Students spend one semester in either the junior or senior year in Los Angeles. During this semester, students engage in a professional internship, as well as take two or three courses in a variety of communications topics taught by professionals prominent in their field. Students may also continue to pursue their liberal arts studies by enrolling in one or more online courses offered by the College of Arts and Sciences. More information can be found at http://lasemester. syr.edu/

## Newhouse in New York City

Newhouse in New York City provides students the opportunity to study for a semester in one of the most vibrant media centers in the world. The program is structured to engage third- or fourth-year students from all Newhouse majors in professional internships, specialized course work and regular interactions with industry leaders. The program will draw on the strength of the vast network of accomplished SU and Newhouse alumni in the communications industry. Students in the program will spend one semester in New York City, interning two-to-three days per week and taking courses at Syracuse University's Fisher Center in midtown Manhattan. Internships will be designed to match each student's interests and abilities and will span a range of disciplines. Students will also be able to take a variety of online courses offered by SU's College of Arts and Sciences. More information can be found at http://suinnycgiving.syr.edu/learning-in-nyc/ newhouse-in-nyc/index.html, or contact Shelly Griffin, Assistant Director of Newhouse Off-Campus Programs, at 315-443-4004, migriffi@syr.edu

## Facilities

The S.I. Newhouse School's buildings are known on campus as Newhouse 1, 2, and 3. All three buildings have faculty offices and classrooms capable of supporting Web, KeyNote, PowerPoint and advanced multimedia presentations.

Newhouse 1 contains administrative offices; digital news writing and editing laboratories with motion graphics, 3D animation, and research tools, such as SPSS. Newhouse 1 also houses multimedia laboratories supporting digital imaging, Final-Cut editing, digital sound editing, and Adobe Creative Suites®; an advertising/ public relations campaigns laboratory; and the Bill Glavin Magazine Lab, a collaborative space for magazine writing and production. There is a large professional photography studio fully equipped with Profoto D4 strobe equipment and lighting attachments, as well as HDSLR and digital Mamiya medium-format camera gear. Exhibition space and a portfolio prep center with digital ink
jet printers are also housed in Newhouse 1.
Newhouse 2 contains an extensive fieldequipment facility that monitors the use of dozens of digital video camera systems (HD tape and DSLR formats), lights, microphones, and other production accessories. Post-production facilities include sixty HD editing stations (AVID®, Adobe Premiere, and Final Cut Pro), a 16-channel, digital music-recording studio; two digital postproduction sound studios equipped with Pro Tools© HD and 5.1 surround sound capabilities; an extensive sound effects and music collection; Photoshop, After Effects, and Cinema 4D graphic systems; and an encoder and server for video streaming on the Web. The Newhouse School is an AVID© and Apple authorized training partner and offers courses that lead to AVID(C) and Final Cut Pro certification. In Newhouse 2, there are also two radio news production labs, and writing labs equipped with ENPS©, the most widely used broadcast newsroom software in the world. Several voice recording booths for recording voice tracks for radio and television stories support the creation of newscasts on multiple platforms. Students edit voice tracks using Audacity(C) and Adobe Audition.
In September 2014, the Dick Clark Studios and Alan Gerry Innovation Center were dedicated and open for class and student use. This fivestudio complex in Newhouse 2 is supported by three control rooms, all equipped with state-of-the-art technology. Two large soundstages and two smaller flex studios can be configured for a variety of single and multicamera productions. The Broadcast and Digital Journalism newsroom and studio feature a fully automated system for newscast labs that integrate robotic cameras, graphic systems and digital video servers. Technology includes Ross Vision(c) video switchers, Xpression graphic systems, Overdrive automation, Lawo audio consoles, Ikegami© broadcast cameras, Imagineⓒ video servers, Avid Isisⓒ storage, and Evertz routing systems. The Gerry Innovation Center encourages students to experiment with new technology including drones, a 30-foot touch screen, Google watches and glasses, a $360^{\circ}$ camera, and technology which supports the creation virtual reality programming. The University's

Newhouse 3 houses a 300-seat auditorium; a collaborative media suite in which students can build Web-based, interactive information sites; executive education interactive classrooms; student lounges; spaces for media-related student activities; and a research center. A dining and social area connects all three buildings in the center of the complex. A glass-enclosed bridge connecting Newhouse 1 and 2 provides a walkway with a winter garden setting for studying or socializing.

# Research Centers 

## Bleier Center for Television and Popular Culture

The. S.I. Newhouse School is the home of the Bleier Center for Television and Popular Culture. The center maintains a large archive of television scripts and history, including videotaped memories of such television pioneers as Steve Allen, Daniel Schorr, and Betty White. The center presents major industry figures as artists-inresidence, sponsors symposia on critical issues in television, and oversees the publication of a Syracuse University Press series of books on television. For further information contact Robert Thompson, director, 315-443-4077, http:// tvcenter.syr.edu/

## Center for Digital Media Entrepreneurship

The Newhouse Center for Digital Media Entrepreneurship provides courses, consulting, and connections to encourage Newhouse students to start businesses and to identify new career opportunities in a fast-changing media industry. The Center teaches digital media trends, business modeling, and the latest in venture development. The work of the center is reinforced through one-on-one coaching and supporting resources on- and off-campus including mentoring, team development, assistance with legal, funding, technology and management issues, and more. Through internships and events (such as South by Southwest in Austin, Internet Week in NY), students are exposed to digital media startups and the start-up culture. In promoting digital media innovation and entrepreneurship, the Center also connects students to alumni and others who are innovating and changing the media industry. For further information contact Sean Branagan, director, 315-443-6310; email startups@syr.edu or visit http://www. newhousestartups.com/

## Newhouse Sports Media Center

The Newhouse Sports Media Center builds upon the Newhouse School's long history and strengths in sports communications. The Center provides courses across the spectrum of media-courses such as, sports writing across platforms, sports reporting, sports production, play-by-play announcing, interviewing, as well as internship experiences to students in a variety of fields. The Center fosters student and alumni interaction and academic-industry partnerships through an alumni board. The Newhouse Sports Media Center sponsors special events and frequent guest lectures on current sports issues. Broadcast journalist and professor of practice, John

Nicholson, the Center director, can be reached at jsnich01@syr.edu, 315-443-4065. For further information, visit: http://newhousesports.syr.edu/

## Tully Center for Free Speech

The. S.I. Newhouse School is the home of the Tully Center for Free Speech, which educates students and the public about the value of free speech. The Center sponsors educational programs and conducts research related to media law and free speech, serves as a clearinghouse on media law issues in New York State, and supports interdisciplinary work on free speech topics at Syracuse University. For further information contact Roy Gutterman, Director at 315-4433523, http://tully.syr.edu/

## The W2O--Newhouse Center for Social Commerce

The W20 Newhouse Center for Social Commerce is the newest center at the Newhouse School. It is devoted to the convergence of communications with "big data," business analytics, digital technology and social media in the emerging area of "social commerce." Established in 2012, with the support of The W20 Group headquartered in San Francisco, the Center brings together communications experts from the industry with faculty and students at Newhouse and across campus. Housed in the Newhouse School's Public Relations Department, the Center makes possible interdisciplinary course offerings, guest speaker visits to campus, applied research projects for clients, training programs in cuttingedge techniques, and internships in W20 offices across the United States and abroad. For more information, contact Maria Russell, campus director, Newhouse Executive Education Programs at 315-443-4066.

## Transactional Records Access Clearinghouse (TRAC)

The Transactional Records Access Clearinghouse (TRAC) is a data gathering, research and distribution organization based at the Newhouse School in partnership with the Martin J. Whitman School of Management at Syracuse University. TRAC's purpose is to provide the American people-and institutions of oversight such as Congress, news organizations, public interest groups, businesses, scholars and lawyers-with comprehensive information about the staffing, spending and enforcement activities of the federal government. For more information, email trac@ syr.edu

## Library Resources and Services

Syracuse University Library supports teaching, learning, and research at the S.I. Newhouse School of Public Communications by providing a wide array of research support services, facilities, and on-site and online resources http://library. syr.edu/

Library collections in public communications cover advertising, broadcast and digital journalism, print journalism, communication theory and research, law of the press, public relations and public diplomacy, printing, photography, film, and freelance writing. Communications-related databases, accessible from any location on or off campus, include LexisNexis Academic, Factiva, Simmons OneView, Library PressDisplay, ProQuest Historical Newspapers, SCOLA, AP Images, NBC Learn Higher Ed, Vanderbilt University's Television News Archive, JSTOR, Communications, World Advertising Research Center, Ad\$pender, Adforum, ProQuest Dissertations \& Theses Global, Web of Science, Scopus, and many more. In addition, the library offers ebooks in the hundreds of thousands and substantial collections of videos and DVDs, sound recordings, media trade magazines, collections of the memoirs of foreign correspondents; and private papers of American news people, broadcasters, authors, and cartoonists. Physical facilities offer extensive hours, including 24 -hour access most days, open collaborative study areas, teaching and seminar spaces, quiet and silent reading spaces, information technology loans, computer labs, reservable group study rooms, and events spaces for student, librarian or faculty use.
The Library's Special Collections Research Center (SCRC) collects the history of American broadcasting. Recent acquisitions include the personal papers of iconic broadcast journalist Ted Koppel. That archive includes near complete runs of Nightline and The Koppel Report. SCRC is also the repository for the papers of several American columnists of national note-Drew Pearson, Westbrook Pegler, George Sokolsky, Harold Ickes, Dorothy Thompson, and Arthur Brisbane; an outstanding collection of prints, negatives, and personal papers of noted photographer Margaret Bourke-White, as well as personal papers, scripts, and audio-visual media of communications personalities Norman Corwin, Mike Wallace, Dick Clark, Long John Nebel, and Fulton Lewis Jr., as well as those involved in the business of television, such as Ed Bleier. The SCRC also maintains an extensive archive of scripts, videos, and personal papers in the field of television history, including scripts and production notes from NYPD Blue and Party of Five; scripts and videotapes of St. Elsewhere; and interviews by critics Arthur Unger and Steven H. Scheuer.

## Major

## Advertising, BS

## Contact:

James Tsao, Chair
318 Newhouse 3, 315-443-7362

## Faculty

Beth Egan, Amy P. Falkner, Kevin O’Neill, Edward W. Russell, Brian Sheehan, James Tsao, Melanie White

Recognized as one of the top advertising and digital branding programs in the country, the advertising major in the S.I. Newhouse School of Public Communications helps students to become "big thinkers" and future advertising leaders. The curriculum provides an interdisciplinary approach to learning, introducing students to both theory and practice through project-based experiences using real clients. Besides taking core courses in advertising and communications, students are encouraged to use their electives to develop an emphasis within their major with the help of their advisors.

This major requires 31-37 credits in communications, depending upon the nature of the three electives which students choose to develop their advertising emphasis.

## Major Requirements

Required Courses ( 25 credits)
ADV 206 - Advertising Practice in a Diverse Society
ADV 208 - The Big Idea in Advertising
ADV 307 - Conceptual and Creative Thinking in Media Planning
ADV 509 - Advertising Research and Planning: A Case Study Approach

COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *

COM 408 - Advertising and Public Relations Law
GRA 217 - Introduction to Graphic Design
Note:
*COM 346 - Race, Gender, and the Media or COM 348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.

## Capstone Requirement: Choose One (3 credits)

ADV 425 - Integrated Advertising Campaigns
PRL 325 - Public Relations Campaign Planning and Execution

## Additional Requirements

## Global Experience

Emphasis (9 credits)
Students are expected to complete an emphasis which complements their individual career goals. Faculty advisors will work with students to put together a series of three courses to fulfill the requirement. At least one of the three courses must be a Newhouse course. Emphases may include, but are not limited to, account management, copywriting and art directing, media/communications planning, digital advertising, account planning, health promotion, and other professional interests that students may wish to pursue.

Total: 31-37 Newhouse credits required.

Broadcast and Digital
Journalism, BS

## Contact:

Chris Tuohey, Chair
318 Newhouse 3, 315-443-4118

## Faculty

Hubert Brown, Michael Cremedas, Barbara C. Fought, Dona Hayes, Keren Henderson, Suzanne Lysak, John Nicholson, Simon Perez, Donald C. Torrance, Chris Tuohey, Randy Wenner

Students in the broadcast and digital journalism program learn writing, information gathering and reporting, formatting, editing, anchoring, and producing for both traditional and digital media platforms. Students also study critical issues (including ethical dilemmas) faced in today's complex communications environment. "Hands-on" experience is emphasized in the broadcast and digital journalism curriculum. Newscast production takes place in our state-of-the-art combined newsroom and HD studio. The newsroom space includes 27 workstations equipped with ENPS© (a widely used news production system), Adobe Premiere Pro © for video editing and Ross Xpression © for graphic creation. The studio portion features fully robotic cameras, a video wall, two large screen monitors,
an anchor desk and interview area. The adjacent control room is fully automated with Ross Overdrive © technology. Student journalists are also able to report live from the scene of news stories using Dejero © portable equipment.

Majors are encouraged to take advantage of University-sponsored internships at broadcast stations (both local and network) across the country.

Additionally, students have the opportunity to do extracurricular work at campus radio and television stations.

## Major Requirements

This is a 38 -credit major. The sequence of courses that follows requires a minimum of four Main Campus semesters to complete. Students majoring in broadcast and digital journalism will take the following courses:

## Required courses (29 credits)

BDJ 204 - News in a Multimedia World
BDJ 265 - Broadcast Journalism Studio Production

BDJ 311 - Broadcast and Digital Newswriting
BDJ 364 - Radio and Digital Audio News Reporting
BDJ 464 - Television and Digital News Reporting
COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *
COM 505 - Communications Law for Journalists
MPD 205 - Photography for Broadcast News
NEW 345 - Critical Perspective on News

## Note:

*COM 346 - Race, Gender, and the Media or COM 348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.

## Capstone Requirement (3 credits)

BDJ 465 - TV \& Digital News Producing and Presenting

Additional Requirements

## Global Experience

Newhouse Electives (6 credits)

Broadcast and digital journalism students choose six credits of Newhouse electives. In consultation with their advisers, students should select as Newhouse electives courses that expand and enrich their knowledge of communications.

## Total: 38 Newhouse credits required.

Graphic Design, B.S.

## Contact:

Bruce Strong, Chair
Department of Multimedia Photography and Design
318 Newhouse 3, 315-443-2304

## Faculty

Mike Davis, Seth Gitner, Ken Harper, Gregory Heisler, Lawrence Mason Jr., Bruce Strong, David C. Sutherland, Sherri Taylor

Students interested in visual communications are drawn to the graphic design program because of its emphasis on both design, image, interactivity, motion graphics, and communications. Students can develop design skills for both print and multimedia environments, as they also develop communications writing skills, photography skills, and knowledge of communications law, ethics, and business.

## Major Requirements

Students majoring in graphic design must complete 38 credits within the Newhouse School of Public Communications. The major requirements follow.

## Required courses (32 credits)

COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *
COM 505 - Communications Law for Journalists or
COM 506 - Communications Law for Television, Radio, Film
GRA 217 - Introduction to Graphic Design
GRA 356 - Type and Image for Multimedia
GRA 437 - Typographic Design
GRA 447 - Motion Graphics and User Experience
GRA 477 - Graphic Design Problems
NEW 205 - News Writing **

PHO 301 - Introduction to Photography for Multimedia

PHO 357 - Photography for Graphic Design

## Note:

*COM 346 - Race, Gender, and the Media or COM 348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.
**Or other Newhouse writing class by petition

## Capstone Requirement (3 credits)

MPD 478 - Graphic Design Capstone

## Additional Requirements

## Global Experience

EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises (Whitman School of Management)
PHI 293 - Ethics and the Media Professions (College of Arts and Sciences)

Newhouse elective (3 credits)
Graphic design majors are required to take one Newhouse elective.

## Total: 38 Newhouse credits required.

## Magazine, BS

## Contact:

Melissa Chessher, Chair
318 Newhouse 3, 315-443-4004

## Faculty

Harriet Brown, Melissa Chessher, Aileen Gallagher, Adam R. Peruta, James Shahin, Corey Takahashi

Students seeking a bachelor's degree in magazine face realistic and exacting assignments designed to prepare them for careers in the magazine field, both in print and online. In small classes, students develop and perfect their ability to research, write, and edit. In addition, they study areas such as graphics, multimedia, law, ethics, and social media.

## Major Requirements

Students are required to complete 35 Newhouse credits in the magazine major. The major requirements are outlined below.

Required Courses (29 credits)
COM 101 - Practical Grammar for Public Communications
COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *

COM 505 - Communications Law for Journalists
GRA 217 - Introduction to Graphic Design
MAG 205 - An Introduction: Editorial, Ethics, and the Business of Magazines
MAG 406 - Magazine Article Writing
MAG 408 - Magazine Editing
NEW 205 - News Writing
NEW 305 - Reporting
Note:
*COM 346 - Race, Gender, and the Media or COM
348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.

Students must take MAG 406 and MAG 408 during different semesters.

## Capstone Requirement: Choose One (3 credits)

MAG 407 - Writing Portfolio
MAG 409 - FIRST ISSUE: Starting a Magazine
ICC 505 - Web Journalism and Innovation

## Additional Requirements

## Global Experience

Newhouse Elective (3 credits)
Magazine majors are required to take one Newhouse elective.

Total: 35 Newhouse credits.
Newspaper and Online
Journalism, BS

## Contact:

Steve Davis, Chair
318 Newhouse 3, 315-443-3371

## Faculty

Lorraine Branham, Steve Davis, Seth Gitner, Roy Gutterman, Joel Kaplan, Johanna Keller, Stephen

## M. Masiclat, R. Gustav Niebuhr, Dan Pacheco

Students in the newspaper and online journalism program learn to meet the challenges of the complex and evolving news industry, including digital platforms. Classes cover how to produce content using all the written and visual tools, and how to deliver it and design it for all the platforms where news is featured. Emphasis remains on learning the traditional core skills such as interviewing, reporting and writing. Students produce multimedia content for the Newhouse School's news website, http://www.thenewshouse. com/, as well as for local media outlets that participate in a strong internship program. Studies also include diversity issues, law and ethics.

## Major Requirements

The newspaper and online journalism major requires 38 Newhouse credits. The major requirements are outlined below. NEW 305 must be completed no later than the first semester of the senior year.

## Required Courses (32 credits)

COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *

COM 505 - Communications Law for Journalists
GRA 217 - Introduction to Graphic Design
MPD 361 - Visual News Reporting
NEW 205 - News Writing
NEW 305 - Reporting
NEW 345 - Critical Perspective on News
NEW 405 - Advanced Reporting
NEW 496 - Senior Portfolio
NEW 508 - Newspaper Editing

## Note:

*COM 346 - Race, Gender, and the Media or COM 348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.

## Capstone Requirement: (Choose One, 3 credits)

ICC 505 - Web Journalism and Innovation NEW 509 - Advanced Newspaper Editing NEW 530 - Topics in Specialized Reporting NEW 535 - Newspaper and Magazine Practicum

## Additional Requirements

## Global Experience

## Newhouse Elective (3 credits)

Newspaper and online journalism majors are required to take one Newhouse elective.

Total: 38 Newhouse credits.
Photography, BS

## Contact:

Bruce Strong, Chair
Department of Multimedia Photography and Design
318 Newhouse 3, 315-443-2304

## Faculty

Mike Davis, Seth Gitner, Ken Harper, Gregory Heisler, Lawrence Mason Jr., Bruce Strong, David
C. Sutherland, Sherri Taylor

The photography program offers two professionally oriented sequences: illustration photography and photojournalism. Both the illustration photography and the photojournalism major tracks emphasize multimedia storytelling and production using still imaging, video and sound to produce final products for print and the web. Photographers work closely with graphic designers and students and faculty from other Newhouse majors. Students also study entrepreneurship, communications law and ethics, as well as develop communications writing and graphic design skills.

## Illustration Photography

The sequence in illustration photography covers the areas of advertising, commercial, fashion, and magazine illustration photography for print and the Web.

## Photojournalism

The sequence in photojournalism is designed for students interested in visual journalism both online and in print.

## Major Requirements

Photography majors must complete 38 credits within the Newhouse School of Public Communications and other requirements as outlined below.

## Requirements for both sequences

 (23 credits):COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *

COM 505 - Communications Law for Journalists
**
GRA 217 - Introduction to Graphic Design
GRA 357 - Type and Image for Photography
NEW 205 - News Writing
PHO 301 - Introduction to Photography for Multimedia

PHO 356 - Photography for Multimedia

## Note:

*COM 346 - Race, Gender, and the Media or COM 348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.
**Photography majors completing the Illustration Photography sequence have a choice of COM law courses, either COM 505-Communications Law for Journalists or COM 506-Communications Law for Television, Radio, Film.

## Additional Requirements for Illustration Photography (12 credits)

PHO 403 - Advertising and Illustration Photography I

PHO 404 - Advertising and Illustration Photography II

PHO 405 - Photojournalism and Multimedia

## Capstone Requirement:

MPD 406 - Advertising and Illustration Photography Capstone

## Additional Requirements for

 Photojournalism (12 credits)PHO 403 - Advertising and Illustration Photography I
PHO 405 - Photojournalism and Multimedia
PHO 425 - Picture and Multimedia Editing
Capstone Requirement:
MPD 426 - Multimedia and Photojournalism Capstone

Additional Requirements for both sequences

## Global Experience

EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises (Whitman School of Management)
PHI 293 - Ethics and the Media Professions (College of Arts and Sciences)

Newhouse Elective for Both Sequences (3 credits)
Photography majors are required to take one Newhouse elective.

## Total: 38 Newhouse credits required.

Public Relations, BS

## Contact

Rochelle L. Ford, Chair
318 Newhouse 3, 315-443-9347

## Faculty

Rochelle L. Ford, Anthony D'Angelo, Guy J. Golan, William Jasso, Hua Jiang, Dennis F. Kinsey, Joon Soo Lim, Maria P. Russell

Public relations is the management of communication between an organization and its publics. The public relations program provides students with instruction in the principles, processes, skills, and management of public relations programs designed to attain or maintain inter-organizational or social accord. Students learn the basic skills of writing, graphic design, and oral presentation, as well as the managerial functions of planning, research, campaign development, and evaluation. The program prepares students with a solid ethical foundation, an understanding of diversity and multiculturalism, and an understanding of the use of social media for strategic engagement with an organization's publics. Emphasis on digital communication, social media analytics, and multimedia storytelling is woven throughout the curriculum. This is a 34-credit major. Students majoring in Public Relations must take the following requirements, and they are encouraged to take internships and other specialized courses as electives.

## Major Requirements

## Required Courses (31 credits)

COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling

COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *

COM 408 - Advertising and Public Relations Law
GRA 217 - Introduction to Graphic Design
PRL 206 - Public Relations Principles and Concepts

PRL 214 - Writing for News and Public Relations in a Digital Age
PRL 215 - Advanced Public Relations Writing for a Digital World

PRL 315 - Public Relations Research
PRL 325 - Public Relations Campaign Planning and Execution
PRL 345 - The Ethics of Advocacy
Note:
*COM 346 - Race, Gender, and the Media or COM 348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.

## Capstone Requirement (3 credits)

PRL 497 - Public Relations Management

## Additional Requirement

Global Experience

## Total: 34 Newhouse credits required.

Television, Radio and Film, BS

## Contact:

Michael Schoonmaker, Chair
318 Newhouse 3, 315-443-9240

## Faculty

Frank Biocca, Richard L. Breyer, Fiona Chew, Jenny Doctor, Richard Dubin, Larry Elin, Keith Giglio, Tula Goenka, Sharon R. Hollenback, Barbara E. Jones, Patricia H. Longstaff, Douglas Quin, Michael
Schoonmaker, Evan Smith, Robert J. Thompson, Donald C. Torrance

The Television, Radio and Film curriculum engages students in the vital dimensions of 21st-century storytelling: critical thinking, writing, foundations of multimedia storytelling, diversity, law and policy, visual and aural aesthetics, business principles and practices, collaboration, global perspective, ethics and a capstone project.
The heart of the major is the purposeful selection of specialized, elective coursework from a broad
range of topics. TRF faculty advisors connect each student to coursework that will best meet their individual interests and needs. The TRF department offers a number of popular culture courses in association with the Bleier Center for Television and Popular Culture, http://tvcenter. syr.edu/
Students are encouraged to participate in our Semester in Los Angeles (http://lasemester.syr. edu/) and study abroad opportunities (http:// studyabroad.syr.edu/).
Alumni have gone on to pursue a wide variety of careers as producers, writers, directors, designers, agents, editors, executives, attorneys, and media educators.

## Major Requirements

This is a 38 -credit major. Students majoring in Television, Radio and Film must fulfill the following requirements:

## Required Courses (23 credits)

COM 101 - Practical Grammar for Public Communications

COM 107 - Communications and Society
COM 117 - Multimedia Storytelling
COM 344 - Diversity and Media Issues (1 credit, plus 3 credits of Arts and Sciences) *

COM 506-Communications Law for Television, Radio, Film
TRF 205 - Sight, Sound and Motion
TRF 211 - Screenwriting
TRF 235 - Principles and Practices: Television-
Radio, Film Industries
TRF 340 - Topics in Critical and Historical Perspectives

## Note:

*COM 346 - Race, Gender, and the Media or COM
348 - Beauty and Diversity in Fashion Media can be used to satisfy the diversity requirement instead of COM 344 and an approved course in the College of Arts and Sciences.

## Capstone Requirement: Choose

 One (3 credits)TRF 400 - Selected Topics Human-Computer Interaction

TRF 461 - Advanced Management Seminar
TRF 462 - Advanced TV Production
TRF 467 - Screenwriting Master Class
TRF 468 - Advanced Audio
TRF 469 - Advanced Filmmaking

TRF 483 - Communications Industry Frontiers
TRF 499 - Honors Capstone Project
TRF 500 - Selected Topics Entertainment Industry Capstone (LA semester)

## Additional Requirements

## Global Experience

PHI 293 - Ethics and the Media Professions (College of Arts and Sciences)

## Specialized Electives (12 credits)

TRF majors work closely with their academic advisor to tailor upper-division Newhouse course work (300-level or higher) to their individual learning and career goals. Students are welcome to explore other areas of communications outside of TRF, as long as they work closely with their advisor to secure permission. Specialized electives in TRF include more than 65 courses. Among them are the following:
COM 470 - Experience Credit
TRF 300 - Selected Topics - Los Angeles Internship
TRF 400 - Selected Topics - Animation and Visual Effects 2D
TRF 400 - Selected Topics - Animation and Visual Effects 3D
TRF 400 - Selected Topics - Directing
TRF 400 - Selected Topics - Producing Workshop
TRF 400 - Selected Topics - Sports Production
TRF 400 - Selected Topics - Working with Actors
TRF 400 - Selected Topics - Production Management
TRF 400 - Selected Topics - Dramatic Series
TRF 400 - Selected Topics - Gaming Narratives
TRF 400 - Selected Topics - Camera Acting (LA)
TRF 400 - Selected Topics - Business of Development (LA)
TRF 400 - Selected Topics - TV Nation (LA)
TRF 400 - Selected Topics - Writer's Journey (LA)
TRF 421 - Feature Film Writing
TRF 422 - Comedy Writing
TRF 424 - Script Development
TRF 442 - Television Production Workshop
TRF 448 - Producing Radio: On Air to Online
TRF 451 - Filmmaking
TRF 453 - Shortform Production
TRF 454 - Music Recording
TRF 456 - Sound for Picture
TRF 457 - Music Underscoring
TRF 459 - Documentary Production

TRF 510 - Specialized Practice
TRF 530 - Popular Culture Studies
TRF 560 - Topics in International Perspectives
TRF 592 - Film Business
TRF 594 - Television Business
TRF 595 - Programming and Audience Analysis
Total: 38 Newhouse credits required.

## Minor

Communications Photography Minor

## Coordinator:

Karen McGee, Assistant Dean
316 Newhouse 3, 315-443-4622, kmcgee@syr. edu

## College:

The S.I. Newhouse School of Public Communications oversees this minor.

## Goal

The members of the Multimedia Photography and Design Department know that life is enriched with the knowledge of how to make high-quality, meaningful images. The purpose of this minor is to provide photography and multimedia expertise to complement the student's primary area of study.

## Audience

This minor is intended for Syracuse University students who are not enrolled in the School of Public Communications. Photography is a valuable tool, of benefit to the architect, sociologist, biologist, forester, anthropologist, teacher, fashion designer, and students pursuing many other professions.

## Entrance Requirements

Applicants are admitted on a space-available basis depending upon cumulative GPA. To be eligible, a student must have completed 30 credits at Syracuse University in courses graded A-F, completed PHO 301 and GRA 217, passed the Multimedia Photography and Design Department's portfolio review, and submitted an application to the Newhouse Undergraduate Advising and Records Office (316 Newhouse 3) by December 15 for spring admission or May 1 for fall admission. Students must declare the
communications photography minor no later than the first semester of their junior year.

## Curriculum Requirements

Students must complete 18 credits of which 12 credits must be at the 300 -level or above.

## Three Required Courses

COM 107 - Communications and Society
PHO 301 - Introduction to Photography for Multimedia

PHO 302 - Principles of Photography II

## Fourth Course (Choose One)

PHO 403 - Advertising and Illustration Photography I
PHO 405 - Photojournalism and Multimedia

## Two Additional Courses

Any Newhouse course for which the student has the prerequisites.

## Additional Information

To declare a minor, students must file a declaration form indicating the specific courses selected. The form must be approved by Assistant Dean Karen McGee (316 Newhouse 3) and by the student's home college.

## Public Communications Studies Minor <br> Coordinator

Karen McGee, Assistant Dean
316 Newhouse 3, 315-443-4622, kmcgee@syr. edu

The S.I. Newhouse School of Public Communications oversees this minor.

## Goal

The goal of this minor is to permit students to examine how the process of public communications affects society. Students will learn how the various media, including newspapers, magazines, books, radio, television, film, advertising, public relations, photography, graphics, online journalism, social media, and new media influence specific audiences and shape society in the United States and globally.

## Audience

This minor is intended for Syracuse University students who are not enrolled in the School of Public Communications. Students choosing this
minor should have an interest in learning more about the social, political, economic, ethical, and legal effects of public communications on their lives as citizens, professionals, and leaders in our society.

## Entrance Requirements

Applicants are admitted on a space-available basis depending upon cumulative GPA. To be eligible, a student must have completed 30 credits at Syracuse University in courses graded A-F and must submit an application to the Newhouse Undergraduate Advising and Records Office (316 N3) by December 15 for spring admission or May 1 for fall admission. Students must declare the public communications minor no later than the first semester of their junior year.

## Curriculum Requirements

Students must complete 18 credits of which 12 credits must be 300 -level or above.

## Two required courses

COM 107 - Communications and Society
COM 505 - Communications Law for Journalists or COM 506 - Communications Law for Television, Radio, Film

## Additional Courses

Four additional courses from the following list. No more than one course may have a number lower than 300. Admission to these courses is based on space availability.
ADV 201 - Best Advertisements in the Universe
ADV 206 - Advertising Practice in a Diverse Society
ADV 345 - The Power and Peril of Global Persuasion
COM 300 - Selected Topics Effects of Sex in the Media

COM 337 - Real News, Fake News: Literacy for the Information Age
COM 346 - Race, Gender, and the Media
COM 400 - Selected Topics Trendspotting Digital Media

COM 400 - Selected Topics International Communications in the European Media (SU Abroad, Strasbourg)
COM 400 - Selected Topics International Digital and Social Media (SU Abroad, Summer, France)

COM 427 - Social Media for Communicators
GRA 345 - Visual Issues in the Media
ICC 300 - Selected Topics New Media Business

ICC 400 - Selected Topics New Media Entrepreneurship

MAG 205 - An Introduction: Editorial, Ethics, and the Business of Magazines

NEW 345 - Critical Perspective on News
NEW 400 - Selected Topics Creating the Next News Start-Up

PRL 206 - Public Relations Principles and Concepts

PRL 345 - The Ethics of Advocacy
PRL 400 - Selected Topics Introduction to Public Relations Abroad (SU Abroad, London)

TRF 235 - Principles and Practices: TelevisionRadio, Film Industries
TRF 340 - Topics in Critical and Historical Perspectives (variable title, repeatable)
TRF 530 - Popular Culture Studies (variable title, repeatable)

TRF 560 - Topics in International Perspectives (variable title, repeatable)

## Additional Information

To declare a minor, students must file a declaration form indicating specific courses selected. The form must be approved by Assistant Dean Karen McGee (315 Newhouse 3) and by the student's home college.

## Los Angeles Semester Option

Students who have been accepted into the Public Communications Studies minor may choose to complete half the minor by participating in the SU in Los Angeles program. To complete the minor and include the LA option, students must be a junior or a senior and do the following:
COM 107 - Communications and Society before studying in LA

TRF 235 - Principles and Practices: TelevisionRadio, Film Industries before studying in LA

Apply and be accepted to the LA program
TRF 300 - Selected Topics Los Angeles Internship while in LA

Complete six other credits of TRF course work at the 300-level or above in LA

Be a full-time student, registered for no fewer than 12 credits while in LA. Students, therefore, must chose an additional course to study in LA with the advice of their home college. This course may be offered online or in person by any SU college.
COM 505 - Communications Law for Journalists or COM 506 - Communications Law for Television, Radio, Film sometime during senior year.

## Additional Information

Application deadlines for the Los Angeles program are in October (for spring) and in February (for fall). The Television, Radio and Film Department holds an information session for interested students each semester. For more information, contact Shelly Griffin, Assistant Director of OffCampus Programs, in 318 Newhouse 3 at 4434004, migriffi@syr.edu.

## Advertising

## ADV 200 - Selected Topics

## S.I. Newhouse School of Public Communications

## 1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ADV 201 - Best Advertisements in the Universe

## S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring Exploration of ads from all around the world analyzing their content, style and effectiveness across cultures. Learn how award-winning ads are developed, produced and their impact. For nonmajors.

## ADV 206 - Advertising Practice in a Diverse Society

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Introduce students to the role of advertising in business. Students will learn basic concepts, regulations, ethics, and diversity associated with advertising as well as how advertising fits into the marketing structure of most industries.

## ADV 208 - The Big Idea in Advertising

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
A look at the most creative advertising strategies and advertising agencies. Develop a critical understanding of a Big Idea in advertising; how it's developed, nurtured, exploited and the impact it can have.
PREREQ: ADV 206

## ADV 300 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ADV 307-Conceptual and Creative Thinking in Media Planning

S.I. Newhouse School of Public Communications 3 credit(s) Every semester Students learn media planning fundamentals to understand how different media are used to enhance the persuasive power of the advertising message. The class will prepare a media plan to support a marketing communications campaign. PREREQ: ADV 208

## ADV 345 - The Power and Peril of Global Persuasion

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Double Numbered with: ADV 645
A critical examination of the ethical challenges confronting advertisers in the global marketplace. Discussion and debate concerning advertising's potential to both enlighten and distort in a digital world. Additional work required of graduate students.
PREREQ: COM 107

## ADV 400 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ADV 401 - Portfolio I

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Major components that go into creating print ad campaigns including benefit, strategy, conceptual thinking, art direction, and copywriting.
PREREQ: ADV 208

## ADV 421 - Portfolio II

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Students begin to craft their portfolios. They will complete a variety of advertising print campaigns that will readily demonstrate a strong command of layout, design, copywriting, and conceptual thinking.
PREREQ: ADV 401

## ADV 425 - Integrated Advertising Campaigns

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Function as a full service advertising agency, encompassing all the disciplines studied during the student's tenure at Newhouse. Students work with clients and execute a complete campaign, from strategy to creative executions and a media plan.

PREREQ: ADV 307 OR ADV 421

## ADV 431 - Portfolio III

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
This course will help students complete their portfolios which will consist of 20 advertisements, including three complete ad campaigns. Oral presentation, job hunting, and the analysis of various ad markets.
PREREQ: ADV 421

## ADV 499 - Honors Capstone Project

S.I. Newhouse School of Public Communications

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## ADV 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ADV 507 - Strategic Media Planning

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring Students will develop a strategic and advanced working knowledge of advertising media planning and buying, audience measurement, media research, new media concepts, audience segmentation and sales presentation.
PREREQ: ADV 307

## ADV 509 - Advertising Research and Planning: A Case Study Approach

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Students will learn how to apply theory and practice of advertising research by analyzing cases and studies in marketing communications and academic publications. Account planning, qualitative, and quantitative research skills are emphasized.
PREREQ: ADV 208

## ADV 523 - Digital Branding and Strategy

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: ICC 523
Examines the transformative role that digital media (websites, social networks, blogs, wikis, mobile) have on the advertising industry. How consumers are reached and interpret the message from these digital platforms.
PREREQ: ADV 307 OR ADV 604

## ADV 526 - Fashion Advertising and Promotion

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring How advertising and promotion build fashion brands, ranging from top designers to local retailers. Students learn how to apply the comprehensive strategic planning process used in advertising to build fashion brands.

## Broadcast and Digital Journalism

## BDJ 200 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BDJ 204 - News in a Multimedia World

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
The basics of cross-media writing for the web; and understanding how community institutions work and how to cover stories involving these institutions using multi-media.

## BDJ 265 - Broadcast Journalism Studio Production

## S.I. Newhouse School of Public Communications

 1 credit(s) IrregularlyStudents are the technical support for the department's daily newscast. Emphasizing both studio positions, such as camera and floor managing, as well as control room positions, such as technical director.

## BDJ 300 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BDJ 311 - Broadcast and Digital Newswriting

S.I. Newhouse School of Public Communications 3 credit(s) Every semester Basic style and construction of broadcast and digital news stories. Composing and writing radio, television, and web news stories under deadline pressure. Techniques of broadcast interviewing and information gathering.
PREREQ: BDJ 204 OR NEW 205
COREQ: BDJ 364

## BDJ 330 - Selected Topics in Specialized Reporting I

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring Introductory specialized reporting course, concentrating on a specific topic, such as sports journalism, and/or utilizing basic or intermediatelevel technologies.
PREREQ: BDJ 364
Repeatable 1 time(s), 6 credits maximum

## BDJ 345 - Critical Perspective on News

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Crosslisted with: NEW 345
Key issues confronting working journalists and news consumers. Evaluation of media performance, ethics, and practices, focusing on how well they serve society; research, site visits, discussion of written papers.
PREREQ: COM 107

## BDJ 364 - Radio and Digital Audio News Reporting

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Gather, produce and report news in the radio and digital audio medium, including field experiences and newscast production in laboratories. Students will be required to analyze political stories, environmental issues, and other issues facing communities.
PREREQ: BDJ 204 OR NEW 205
COREQ: BDJ 311

## BDJ 400 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BDJ 464 - Television and Digital News Reporting

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semesterGathering and reporting news using electronic means. Edited TV and web news reports, under deadline pressure are final products. Tape, as well as live reporting exercises. Coordination with television newscasts.
PREREQ: BDJ 364 AND (MPD 205 OR PHO 200)

## BDJ 465 - TV \& Digital News Producing and Presenting

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Writing, story selection, positioning of local and
national stories; plus weather, sports, producing, and presenting. Presentation of news on the Internet and on-set taping of a complete news program.
PREREQ: BDJ 464

## BDJ 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BDJ 510 - Topics in Specialized Practices

S.I. Newhouse School of Public Communications

1 credit(s) At least $1 x$ fall or spring Development of skills that enhance the news product. Different sections could focus on different specialized practices such as internet research or vocal performance PREREQ: BDJ 204 OR NEW 205 OR BDJ 663 Repeatable 2 time(s), 3 credits maximum

## BDJ 530 - Topics in Specialized Reporting II

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Event and issue-oriented reporting. Each section focuses on a content area such as politics, consumerism, or the environment. PREREQ: BDJ 364 OR BDJ 464 OR 663 OR 664 Repeatable 1 time(s), 6 credits maximum

## BDJ 560 - Television News Magazine Production

## S.I. Newhouse School of Public Communications

 1 credit(s) IrregularlyStudents produce a weekly public affairs show, which explores topics important to the University and Syracuse community. This magazine show includes field reports and studio interviews. Student jobs include booking guests, reporting, and producing.
Repeatable 2 time(s), 3 credits maximum

## BDJ 566 - Special News Coverage

## S.I. Newhouse School of Public Communications

 3 credit(s) IrregularlyPlanning and production of longer news-related program segments. Writing, research, execution of minidocumentaries and enterprise reports. Field material will be edited for air-ready television presentation.
PREREQ: BDJ 464

## BDJ 567 - Advanced Newscast Producing and News Management

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring The theory and practice of producing television newscasts. Introduces the basics of broadcast news management. Covers the concepts of being a newsroom leader.
PREREQ: BDJ 465

## Communications

## COM 101 - Practical Grammar for Public Communications

S.I. Newhouse School of Public Communications 1 credit(s) Every semester
Understanding how Standard American English is used in Public Communications and developing the skills to apply that knowledge to writing and speaking.

## COM 107-Communications and Society

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Mass media and their functions. Contemporary problems of the media; legal, social, economic, and psychological implications of their relationships with society. Required of all students in the school.

## COM 117 - Multimedia Storytelling

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Working in collaborative teams, students write, design and produce short fiction and non-fiction stories using digital media and the Internet. Emphasis on how story structures change with audience and delivery system.

## COM 200 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## COM 300 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## COM 337 - Real News, Fake News: Literacy for the Information Age

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Critical-thinking skills to distinguish news from other information, such as commentary and propaganda, and to judge quality of news and sources. For non-journalism majors.

## COM 344 - Diversity and Media Issues

## S.I. Newhouse School of Public Communications

 1 credit(s) Every semesterStudents will develop understanding of concepts such as social identity, stereotyping, ideology and hegemony. Apply concepts to areas such as news, sports media and contemporary music, through the use of case studies and online discussions. PREREQ: COM 107

## COM 346 - Race, Gender, and the Media

S.I. Newhouse School of Public Communications 3 credit(s) Every semester Introduction of fundamental issues of diversity that confront media workers and audiences. Topics include roles, obligations, stereotypes, ownership of media in a multicultural society. PREREQ: COM 107

## COM 347 - Federal Government \& the Media

## S.I. Newhouse School of Public Communications

 3 credit(s) IrregularlyHow journalists affect the policies and actions of government and how government officials seek to inform, influence, and sometimes obstruct the media. Topics include an examination of ethics and outcomes of often flawed media efforts.

## COM 348 - Beauty and Diversity in Fashion Media

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring
The issues that arise in the fashion industry and the messages that it communicates to the public through its associated media outlets.

## COM 400 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## COM 408 - Advertising and Public Relations Law

## S.I. Newhouse School of Public Communications

2 credit(s) Every semester

A survey of legal issues relevant to advertising and public relations. Specific topics will include free speech, corporate speech, advertising regulations, political advertising, intellectual property, and defamation.

## COM 411 - Social and Public Issues in Public Communications

## S.I. Newhouse School of Public Communications

 3 credit(s) IrregularlyProblems in decision making for mass-media
professionals and institutions in context of current social and cultural issues.

## COM 427-Social Media for Communicators

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semesterCourse examines strategic use of digital and social media platforms and tools for professional communication purposes, with emphasis on hands-on experience and skill. Students learn to analyze social media for communication industries.

## COM 470 - Experience Credit

S.I. Newhouse School of Public Communications 1-6 credit(s) Every semester Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## COM 490 - Independent Study

## S.I. Newhouse School of Public Communications

 1-6 credit(s) Every semesterIn-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## COM 499 - Honors Capstone Project

S.I. Newhouse School of Public Communications

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## COM 500-Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

COM 505-Communications Law for Journalists
S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Survey of communications law emphasizing First
Amendment issues: libel, privacy, confidentiality, access to information, etc. for journalists.
Students may not receive credit for more than one of the following: COM 505,506,507.

COM 506 - Communications Law for Television, Radio, Film
S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Survey of communications law emphasizing First Amendment and regulatory law as they pertain to television, radio, film. Students may not receive credit for more than one of the following: COM 505,506, 507.

COM 507-Communications Law for Advertising and Public Relations
S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Survey of communications law emphasizing applications to advertising and public relations. Students may not receive credit for more than one of the following: COM 505,506,507.

COM 515 - History of Media in the United States in the Modern Age
S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Print and electronic media in the United States in the context of social and political developments in the 20th century.

## COM 527 - International Communications

S.I. Newhouse School of Public Communications

3 credit(s) Irregularly
Communication of news and opinion among nations and under varying types of social, political, and economic systems. Roles of mass media, news agencies, governments, and communications systems. Offered at SU Abroad Centers in London and Strasbourg.

## Graphic Design

## GRA 217 - Introduction to Graphic Design

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Principles of digital design, composition, computerized layout, typography and imaging applied to advertising, public relations, and publication design for print and web. Introduction to the computer as layout and design tool for
visual communications practice. Concurrent lab required.
COREQ: GRA 218

## GRA 218 - Introductory Graphics Laboratory

S.I. Newhouse School of Public Communications 0 credit(s) Every semester
Continuation of GRA 217. Students learn contemporary applications such as Photoshop, Illustrator and InDesign for print and web. COREQ: GRA 217

## GRA 300 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) Every semester Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.
## GRA 345 - Visual Issues in the Media

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring View and analyze the power of media images; pictures, infographics, trademarks, and graphic designs - still and motion. Political influences of television, representations of minorities and women, and ethics of images, for practitioners and audience members.
PREREQ: COM 107

## GRA 356 - Type and Image for Multimedia

## S.I. Newhouse School of Public Communications

 2 credit(s) IrregularlyIntermediate work in graphic design for design majors building on the foundations of writing, photography and graphic design. Students create original print and web design projects concentrating on typography, grid structure and multi-surface design. Portfolio review required.

## GRA 357 - Type and Image for Photography

## S.I. Newhouse School of Public Communications

 1 credit(s) IrregularlyIntermediate work in graphic design for photo majors building on the foundations of writing, photography and graphic design from previous courses. Using photographic work from PHO 356 students produce final print and web design projects. Portfolio review required.

## GRA 400 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## GRA 437 - Typographic Design

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: GRA 637
Exploration of proper techniques for the setting of typography. Study of history of graphic design and typeface design. Focus on expressive and functional use of type as it relates to print, web and motion graphics. Additional work required of graduate students.
PREREQ: GRA 217 AND PHO 301
COREQ: NEW 205

## GRA 447 - Motion Graphics and User Experience

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Double Numbered with: GRA 647 Using the latest in motion graphics and interface design technologies, students learn to build rich user experiences. Students will create web user interfaces and multimedia productions using video, still images, audio and type. Additional work required of graduate students.

## GRA 477 - Graphic Design Problems

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Double Numbered with: GRA 677
Individual investigation into problems in graphic design. Collaborative work with other departments. Projects designed by students and carried out under guidance of faculty. Projects submitted for print or web.
PREREQ: GRA 437 OR GRA 447 OR 637

## GRA 496 - Senior Portfolio

S.I. Newhouse School of Public Communications

0 credit(s) At least 1x fall or spring Crosslisted with: PHO 496
Assembling final portfolio for a Visual and Interactive Communications faculty mentor to review and grade either pass or fail. Failing portfolios may be improved and resubmitted. PREREQ: PHO 404 OR PHO 425 OR GRA 477

## GRA 540 - Advanced Design and Production

S.I. Newhouse School of Public Communications 3 credit(s) At least 1 x fall or spring Students work out plans, specifications, and details of design, layout, illustration, production. Classic and contemporary styles; functional design.
PREREQ: GRA 217 OR 617
Repeatable 1 time(s), 6 credits maximum

## GRA 547 - Magazine Design and Production

## S.I. Newhouse School of Public Communications

3 credit(s) Irregularly
Principles of magazine graphics using current practices and technology to create magazine designs. Digital typography, layout, cover design, computer-based production. Credit cannot be given for GRA 547 and GRA 567.
PREREQ: GRA 217 OR 617

## GRA 550 - Workshop in Typography

## S.I. Newhouse School of Public Communications

 1-3 credit(s) IrregularlyTypographic work under faculty member or committee guidance. Individual or group projects with faculty assistance, critique. Projects include any typographic application to public communications. May not be repeated for credit. PREREQ: GRA 217 OR 617

## GRA 557 - Information Graphics

S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Principles and techniques of information visualization for public communications applications including journalism, advertising, and public relations. Emphasis on principles of quantitative and qualitative research for information graphics and techniques of visual narrative and information-based design. PREREQ: GRA 217 OR 617

## GRA 567 - Advertising Production

## S.I. Newhouse School of Public Communications

 3 credit(s) IrregularlyDevelopment of ad campaigns from thumbnail sketches through finished comps. Emphasizing concept and its stylistically appropriate expression through typography, layout, and use of photography/illustration publishing standards including current computer software for design.
Concurrent lab required.
PREREQ: GRA 217 OR 617

## GRA 587 - News Design

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Principles of typography, image editing, and design using computer pagination to solve problems in newspaper, magazine layout.
PREREQ: GRA 217 OR 617
Interactive Communications
Core

## ICC 300 - Selected Topics

S.I. Newhouse School of Public Communications

1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ICC 306 - Applied Research in Content Management

S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Double Numbered with: ICC 606
Students learn and use software tools such as site analytics, tracking code, and the PageRank algorithm to manage search engine results and online traffic. Emphasis on theoretical basis of web traffic aggregation and SEO principles. Additional work required of graduate students.

## ICC 400 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ICC 500 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ICC 505 - Web Journalism and Innovation

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semesterCollaborate with students and professors to produce engaging Web products for the campus community by utilizing multimedia skills, learning interactive Web production systems and gaining an understanding of the changing media landscape.
PREREQ: NEW 305 OR BDJ 364 OR 664 OR MNO 617

## ICC 523 - Digital Branding and Strategy

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Crosslisted with: ADV 523
Examines the transformative role that digital media (websites, social networks, blogs, wikis, mobile) have on the advertising industry. How consumers are reached and interpret the message from these digital platforms.

## ICC 565 - Designing Interactivity

S.I. Newhouse School of Public Communications 3 credit(s) Every semester

Students work in teams to design interactive computer-based public communication systems/ applications. Using multimedia authoring systems of HTML, teams will research, design, and evaluate public communication problems for computerbased delivery.

## ICC 575 - Advanced Web Design

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Students learn programming and scripting
concepts for advanced client-side web applications. This course builds on mark-up frameworks to create advanced interactions and dynamic content updates.
PREREQ: ICC 565

## Magazine

MAG 205 - An Introduction: Editorial,
Ethics, and the Business of Magazines
S.I. Newhouse School of Public Communications 3 credit(s) Every semester
An exploration of the editorial side of magazines, the roles advertising and circulation play in revenue generation, and the ethical challenges faced by writers, editors, photographers, and designers. Major report on magazine of student's choice.
PREREQ: COM 107

## MAG $\mathbf{3 0 0}$ - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MAG 406 - Magazine Article Writing

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Writing and selling basic types of magazine articles: ideas, slanting, research, organization, dealings with editors. Students write one fulllength article. Additional work required of graduate students.
PREREQ: MAG 205 AND NEW 305

## MAG 407 - Writing Portfolio

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Writing longer and more complex forms of articles and the creation of a digital portfolio of work in which students research and write a major article and weekly pieces for a blog or personal website under close editorial supervision of instructor. PREREQ: MAG 406

## MAG 408 - Magazine Editing

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Editing and rewriting copy for magazines: ideas, heads, decks, story organization. Pictures, layout, dummy production. Additional work required of graduate students.
PREREQ: MAG 205 AND NEW 305

## MAG 409 - FIRST ISSUE: Starting a Magazine

## S.I. Newhouse School of Public Communications

 3 credit(s) IrregularlyProblems and opportunities that magazine and magazine web editors face each day. A variety of topics ranging from ethics to covers, editorial mix, positioning a magazine and its online extension. PREREQ: MAG 408

## MAG 499 - Honors Capstone Project

S.I. Newhouse School of Public Communications 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## MAG 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MAG 518 - Critical Writing

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Criticism and its function in journalism. Reviewing books, plays, motion pictures, and other art forms. PREREQ: (NEW 305 AND MAG 205) OR MNO 617

## MAG 529 - Writing and Editing for Magazine Websites

## S.I. Newhouse School of Public Communications

 3 credit(s) IrregularlyEverything you need to know to join a magazine-
branded website's staff: eye-catching copy, clickable headlines, site design, custom-edit projects, interactive tools, video and blogs, plus search engine optimization, social media engagement, and audience tracking.
PREREQ: MAG 406 OR MAG 408 OR MNO 617

## MAG 538 - Travel Writing

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring Writing and selling magazine articles about traveling and specific geographic areas. Students will write in a variety of styles, especially exploring
the narrative form.
PREREQ: NEW 305 OR MNO 617

## Multimedia Photography and Design

MPD 205 - Photography for Broadcast News

S.I. Newhouse School of Public Communications

2 credit(s) Every semester
Foundation in the principles and skills of photography and visual journalism as a base for motion media.
PREREQ: COM 117

## MPD 300 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable
## MPD 361 - Visual News Reporting

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semesterExplore ways of telling compelling stories by utilizing various forms of digital media, combining audio, still images and motion to advance narratives beyond the printed page.
PREREQ: NEW 205 AND COM 117
MPD 406 - Advertising and Illustration Photography Capstone
S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Double Numbered with: MPD 606 Using advanced photo illustration skills, students collaborate with other Newhouse majors and on a major department project. Students develop their individual brand producing multimedia work for their print and web portfolio. Students cannot receive credit for more than one of the following: MPD 406/606, MPD 426/626, MPD 478/678. Additional work required of graduate students. PREREQ: PHO 404

## MPD 426 - Multimedia and Photojournalism Capstone

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: MPD 626
Using advanced multimedia and journalism skills students work in collaboration with other Newhouse majors and on a major department project. Students develop their individual brand producing multimedia work for their print and web portfolio. Students cannot receive credit for more than one of the following: MPD 406/606,

MPD 426/626, MPD 478/678. Additional work required of graduate students.
PREREQ: PHO 425

## MPD 478 - Graphic Design Capstone

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring Double Numbered with: MPD 678 Using advanced interactive and graphic design skills students work in collaboration with other Newhouse majors and on a major department project. Students develop an individual brand producing multimedia work for their print and web portfolio. Students cannot receive credit for more than one of the following: MPD 406/606, MPD 426/626, MPD 478/678. Additional work required of graduate students PREREQ: GRA 477

## MPD 499 - Honors Capstone Project

S.I. Newhouse School of Public Communications 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.

## MPD 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## Newspaper and Online Journalism

## NEW 205 - News Writing

S.I. Newhouse School of Public Communications 3 credit(s) Every semester Basic techniques in news gathering and writing. Emphasis on accuracy, concise presentation, and meeting deadlines. Styles, grammar, spelling, sentence structure, story organization, and copy preparation.

## NEW 300 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NEW 305 - Reporting

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Reporting and writing of news stories from information gathered through interviewing, document research, data base retrieval, and
observation.
PREREQ: NEW 205 OR BDJ 204

## NEW 345 - Critical Perspective on News

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Crosslisted with: BDJ 345
Key issues confronting working journalists and news consumers. Evaluation of media performance, ethics, and practices, focusing on how well they serve society; research, site visits, discussion of written papers.
PREREQ: COM 107

## NEW 400 - Selected Topics

## S.I. Newhouse School of Public Communications

## 1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NEW 405 - Advanced Reporting

S.I. Newhouse School of Public Communications 3 credit(s) Every semester Writing based on the reporting of public affairs including the coverage of beats, development of sources, investigative news gathering techniques and interpretive writing.
PREREQ: NEW 305 OR BDJ 364

## NEW 496 - Senior Portfolio

## S.I. Newhouse School of Public Communications

0 credit(s) Every semester
Assembling final portfolio for a Newspaper and Online Journalism faculty mentor to review and grade either pass or fail. To complete the major, a student must receive a grade of $P$.
PREREQ: NEW 305

## NEW 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## NEW 508 - Newspaper Editing

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Preparation of copy for publication. Headline writing. Correction of copy. Evaluation of news. Condensation of news stories. News display and makeup.
PREREQ: (NEW 205 AND GRA 217) OR (BDJ
204 AND GRA 217) OR (NEW 605 AND GRA 617)

## NEW 509 - Advanced Newspaper Editing

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Copy editing, headlines, visuals, design, and technology. Handling departments and special sections, editing complex copy. Significant trends in newspaper editing.
PREREQ: MAG 408 OR NEW 508 OR MNO 608

## NEW 530 - Topics in Specialized

 Reporting
## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Event- and issue-oriented reporting in politics, courts, science, environment, minorities, education, local government. One news area to a section.
PREREQ: NEW 305 OR BDJ 364 OR 664 OR MNO 617
Repeatable 1 time(s), 6 credits maximum

## NEW 535 - Newspaper and Magazine Practicum

## S.I. Newhouse School of Public Communications

1-3 credit(s) Every semester
Practical on-site experience reporting and writing for Central New York newspapers and magazines. Weekly class sessions. Discussion of supplementary journalistic topics. Class assignments. Research paper.
PREREQ: NEW 305 OR BDJ 364 OR 664 OR MNO 617
Repeatable 2 time(s), 3 credits maximum

## Photography

## PHO 200 - Selected Topics

## S.I. Newhouse School of Public Communications

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHO 204 - Introduction to Photography

## S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Introduction to camera handling, functions, and controls. Principles of composition, development, and printing. In London only.

## PHO 300 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHO 301 - Introduction to Photography for Multimedia

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Fundamentals of communications photography, digital imaging, content, composition, sound and motion as the foundation for print and multimedia production.
COREQ: PHO 556
PHO 302 - Principles of Photography II
S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Extensive experience in location lighting for photojournalism and advertising photography. Fundamentals of color photography and digital technology.
PREREQ: PHO 301

## PHO 356 - Photography for Multimedia

S.I. Newhouse School of Public Communications 2 credit(s) Irregularly
Practical course in intermediate photographic skills emphasizing lighting, retouching and image enhancement, color theory, storytelling, and human representation through photojournalism, portraiture and fashion photography. Students create original imagery for print and multimedia. Portfolio review required.

## PHO 357 - Photography for Graphic Design

## S.I. Newhouse School of Public Communications

1 credit(s) Irregularly
Practical course in intermediate photographic skills for graphic design majors emphasizing lighting, retouching, and image enhancement, color theory, storytelling, still-life photography, and human representation through portraiture. Students create original imagery for print and multimedia. Portfolio review required.

## PHO 400 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHO 403 - Advertising and Illustration Photography I

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Double Numbered with: PHO 603
Lecture, studio, and laboratory on producing digital, still, motion and sound for commercial and advertising content for print and web. Emphasis on concept generation and studio and location lighting, Additional work required of graduate
students. Graduate student must be admitted into program or portfolio review.

## PHO 404 - Advertising and Illustration Photography II

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: PHO 604
Lecture, studio, and lab and computer production of advanced products for web and print advertising. Emphasizing the use of live models for portraiture, product and fashion photography. Professional business practices. Additional work required of graduate students.
PREREQ: PHO 403 OR 603

## PHO 405 - Photojournalism and Multimedia

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Double Numbered with: PHO 605 Principles and practices of photojournalism and multimedia storytelling. Photographing news, features, portraits, and sports. Picture story and essay production using digital, still, video, and sound. Location lighting techniques. Marketing practices. Additional work required of graduate students.

## PHO 425 - Picture and Multimedia Editing

## S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: PHO 625
Develops newspaper and magazine picture editor's management skills for multimedia storytelling. Communicative qualities of images and sound and how they affect decisions of picture use in publications and on the web. Additional work required of graduate students. PREREQ: PHO 405

## PHO 496 - Senior Portfolio

## S.I. Newhouse School of Public Communications

0 credit(s) Every semester
Crosslisted with: GRA 496
Assembling final portfolio for a Visual and Interactive Communications faculty mentor to review and grade either pass or fail. Failing portfolios may be improved and resubmitted. PREREQ: PHO 404 OR PHO 425 OR GRA 477

## PHO 500 - Selected Topics

## S.I. Newhouse School of Public Communications

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PHO 510 - Photographic Workshop

## S.I. Newhouse School of Public Communications

3 credit(s) Irregularly
Advanced photography. Problems in advertising illustration, photojournalism, and digital imaging. Emphasizing selection, composition, and content suitable for communication media.
Repeatable 1 time(s), 6 credits maximum

## PHO 511 - Color Imaging

S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Technical and creative application of color theory and color-imaging technology for communications.

## PHO 515 - Contemporary Photography

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring Contemporary photography in illustration, advertising, and journalism. Aesthetic and communicative aspects. Lecture course without laboratory.

## PHO 530 - Topics in Photography

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
In-depth study of different professional photography specializations including sports photography, fashion and portrait photography, documentary photography, architectural photography, and other topics selected by the department.
Repeatable 2 time(s), 9 credits maximum

## PHO 555 - Photography for Newspaper and Magazine

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Basic principles and uses of news photography as medium of communication. Photographic medium as used by editors. Not open to photography majors.
COREQ: PHO 556

## PHO 556 - Basic Photo Lab

S.I. Newhouse School of Public Communications 0 credit(s) Every semester Basic photo lab for PHO 301 or PHO 555.
COREQ: PHO 301 OR PHO 555

## PHO 560 - Advanced Photo Lab

S.I. Newhouse School of Public Communications 0 credit(s) Every semester
Advanced photo lab to support advanced photography course work. Enrollment in advanced photography courses.
Repeatable 7 time(s)

## PHO 581 - Photographic Workshop

S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Advanced photography workshop in advertising and/or photojournalism. Emphasis on content suitable for publication in communications media. Offered London campus only.

## Public Relations

## PRL 206 - Public Relations Principles and Concepts

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Introduction to growing field of public relations, its history and its future; careers; job requirements; role as a management function building twoway communication for organizations and their publics; ethics and social responsibility; social media impact.
PREREQ: COM 107

## PRL 214 - Writing for News and Public Relations in a Digital Age

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Introduction to basic fundamentals of good writing, news writing, news values and basic reporting; writing public relations forms with creation of a Webinar; AP Style, achieving consistently high-quality news and public relations writing.
PREREQ: COM 107 AND PRL 206

## PRL 215 - Advanced Public Relations Writing for a Digital World

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Builds on news/media writing and fundamental writing skills to develop advanced public relations writing for digital and traditional outlets; media relations writing; crisis communications; news conferences; and writing in a diverse, multicultural world.
PREREQ: PRL 206 AND PRL 214

## PRL 300 - Selected Topics

## S.I. Newhouse School of Public Communications

 1-6 credit(s) IrregularlyExploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PRL 315 - Public Relations Research

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
The application of social science research
methods to solve public relations planning,
implementation, and evaluation problems. Students design and carry out actual research projects and produce final client reports. PREREQ: PRL 206

## PRL 325 - Public Relations Campaign Planning and Execution

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Students apply management, strategic planning, problem solving, tactics and research to client needs. Teams design, execute and evaluate appropriate integrated campaigns for actual clients. Frequent client/team contact and interaction required.
PREREQ: (PRL 215 AND PRL 315) OR ADV 509

## PRL 345 - The Ethics of Advocacy

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Double Numbered with: PRL 645
Study and application of moral philosophy to ethical decision making in organizations. Examines ethical challenges in public relations, business management, advocacy, public affairs, or other career avenues. Additional work required of graduate students.

## PRL 400 - Selected Topics

## S.I. Newhouse School of Public Communications

## 1-6 credit(s) Irregularly

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PRL 497 - Public Relations Management

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semester Capstone course to understand management of public relations in an organizational context, apply best practices in diverse and challenging global environments, using the managerial process of planning and decision making, organizing, controlling and leading.PREREQ: PRL 215 AND PRL 315

## PRL 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PRL 525 - Public Relations Practicum

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
On-site work experience in the Syracuse
area to acclimate students to the realities of organizational life; to explore one type of public relations in depth; to apply classroom theory to the solution of everyday communications problems and to develop additional work samples for professional portfolios.
PREREQ: PRL 215 AND PRL 315 AND PRL 325

## PRL 530 - Special Topics in Public Relations

S.I. Newhouse School of Public Communications 1-3 credit(s) At least 1 x fall or spring In-depth look at different public relations specializations, including media relations, government relations, investor relations, crisis communications, employee communications, and sports information.
Repeatable 2 time(s), 3 credits maximum

## Television, Radio, and Film

## TRF 205 - Sight, Sound and Motion

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Study and practice of the aesthetic structures and production processes involved in creating effective motion picture, television and sound content.
PREREQ: COM 117

## TRF 211 - Screenwriting

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Exploring the craft of writing involved in motion picture, television and digital media storytelling through in-depth study and practice.
PREREQ: COM 117

## TRF 235 - Principles and Practices: Television-Radio, Film Industries

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semester Origins and dynamics of corporate structures, revenue models, content, distribution, and regulation in the television, radio, film, and interactive media industries.PREREQ: COM 107

## TRF 300 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## TRF 340 - Topics in Critical and Historical Perspectives

S.I. Newhouse School of Public Communications

3 credit(s) Every semester

Double Numbered with: TRF 640
Non-print media as art forms and social, political and cultural forces. Critical analysis of individual products of broadcasting and motion pictures in relation to the systems for which they were created. Additional work required of graduate students
Repeatable 3 time(s), 12 credits maximum

## TRF 400 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## TRF 421 - Feature Film Writing

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 621
Study and practice of the craft of feature film writing. Additional work required of graduate students.
PREREQ: TRF 211

## TRF 422 - Comedy Writing

S.I. Newhouse School of Public Communications 3 credit(s) Every semester Double Numbered with: TRF 622 Study and practice of the craft of comedy writing for television and film. Additional work required of graduate students.
PREREQ: TRF 211

## TRF 424 - Script Development

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Double Numbered with: TRF 624 Screenwriting theory and the script development process: writing topics include story structure, genres, character development, dialogue, and script formatting. Business topics include pitching, writing script coverage, supervising development, and breaking into the industry. Additional work is required of graduate students.
PREREQ: TRF 211

## TRF 442 - Television Production Workshop

## S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: TRF 642
Students write, design, produce, direct, and
program projects specifically for television
presentation. Additional work required of graduate students.
PREREQ: TRF 205

## TRF 448 - Producing Radio: On Air to Online

S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: TRF 648
Intermediate study and practice in creating
fictional and nonfictional radio content for broadcast and online distribution. Additional work required of graduate students.

## TRF 450 - Advanced Practice: Special Projects

## S.I. Newhouse School of Public Communications

1-3 credit(s) Irregularly
Double Numbered with: TRF 650
Faculty member works with student on project especially tailored for his/her unique content objectives. Additional work required of graduate students.
Repeatable 5 time(s), 6 credits maximum

## TRF 451 - Filmmaking

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Double Numbered with: TRF 651
Student teams produce and edit short films using digital production and post production technology. Emphasis on narrative filmmaking. Additional work required of graduate students.
PREREQ: TRF 205

## TRF 453 - Shortform Production

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 653
Techniques of shortform moving image media such as commercials, promos, music videos, show openings, special effects, and high impact packaging. Additional work required of graduate students.
PREREQ: TRF 205

## TRF 454 - Music Recording

S.I. Newhouse School of Public Communications 3 credit(s) At least 1x fall or spring Double Numbered with: TRF 654
Students produce a recording of a musical performance in a 24 -track recording studio. Topics include: Aesthetics of recorded sound, acoustics, psycho-acoustics, the multitrack recording process, mixing, microphone techniques, signal processing. Additional work required of graduate students.

## TRF 456 - Sound for Picture

## S.I. Newhouse School of Public Communications

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: TRF 656
Introduction to theory and production of sound for television and film. Includes information
processing, aesthetics, perception of sound, sound/picture relationship, analog and digital sound studios, production recording, signal processing, nonlinear editing and mixing. Additional work required of graduate students.

## TRF 457 - Music Underscoring

S.I. Newhouse School of Public Communications

3 credit(s) At least 1 x fall or spring Double Numbered with: TRF 657 The theory and practice of producing music to underscore visual material. Additional work required of graduate students.

## TRF 458 - Radio Practicum

## S.I. Newhouse School of Public Communications

3 credit(s) Irregularly
Double Numbered with: TRF 658
Guided experience in professional radio environments. Areas of expertise include sales, programming, production, promotions, engineering, news/public affairs, and performance. Additional work required of graduate students.

## TRF 459 - Documentary Production

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Double Numbered with: TRF 659
Student teams write, produce, and edit documentary projects. Additional work required of graduate students.
PREREQ: TRF 205

## TRF 461 - Advanced Management Seminar

S.I. Newhouse School of Public Communications

3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 661
Business of communications industry focusing on management skills and their effective application. Additional work required of graduate students.

## TRF 462 - Advanced TV Production

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Double Numbered with: TRF 662
Students produce six episode, scripted television series to demonstrate mastery of advanced television production practices. Additional work required of graduate students.
PREREQ: SENIOR LEVEL

## TRF 467-Screenwriting Master Class

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Double Numbered with: TRF 667
Advanced practice built around professional workshops, sponsored by the Center for Popular Television, and guest speakers. Students
interact with professionals while working on their screenwriting portfolios. Additional work required of graduate students.

## TRF 468 - Advanced Audio

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
Double Numbered with: TRF 668 Independent and specialized practice in audio, including sound tracks for film or television; CD albums; radio drama; or spot announcements. Additional work required of graduate students. PREREQ: TWO OF THE FOLLOWING: TRF 454 OR TRF 456 OR TRF 457 OR TRF 458 OR MUI 301 OR MUI 307 OR MUI 308 OR MUI 320

## TRF 469 - Advanced Filmmaking

S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Double Numbered with: TRF 669
Students propose independent film projects (fiction or documentary), and if approved, produce them using digital video and sound technology.
Additional work required of graduate students.

## TRF 483 - Communications Industry Frontiers

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring Double Numbered with: TRF 683 Overview of the trends in business, technology, and regulation that are likely to have an impact on the communications sector. Additional work required of graduate students.

## TRF 499 - Honors Capstone Project

S.I. Newhouse School of Public Communications 1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.

## TRF 500 - Selected Topics

S.I. Newhouse School of Public Communications 1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## TRF 510 - Specialized Practice

S.I. Newhouse School of Public Communications 1 credit(s) Every semester These four-week mini-courses provide specific areas of study not covered in depth in other courses. Examples: Production Management, Budgeting, Editing, Lighting, Location Sound, Videography, and others based on faculty and student interest.
Repeatable

## TRF 530 - Popular Culture Studies

S.I. Newhouse School of Public Communications 3 credit(s) Every semester
In-depth examination of critical issues, aesthetics, genre, and authorship involved in electronic media and cinema. Topics range from television genres to film classics.
Repeatable 3 time(s), 12 credits maximum

## TRF 545 - Television \& Radio Performance

S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
Theory and practice of effective television and radio performance. Closed circuit studio experience planning and presenting educational and commercial material.

## TRF 560 - Topics in International Perspectives

S.I. Newhouse School of Public Communications 3 credit(s) Irregularly
In-depth examination of issues and practices involved in international television and film. Topics alternate from semester to semester. Examples include: Global Communication, Ways of Seeing, Comparative Systems, and British Cinema. Repeatable 1 time(s), 6 credits maximum

## TRF 592 - Film Business

## S.I. Newhouse School of Public Communications

 3 credit(s) Every semesterEconomics of the film industry. Financing of films, budgets, sources of funds, contracts. Securing distribution. National and international marketing of films. Film rental. Booking films for television or theater. Exploitation of ancillary markets.

## TRF 594 - Television Business

## S.I. Newhouse School of Public Communications

3 credit(s) Every semester
Management principles and practices in electronic media; organizational structures, financial controls, revenue procurement, economic theory, management law, product development, and personnel administration.

## TRF 595 - Programming and Audience Analysis

S.I. Newhouse School of Public Communications 3 credit(s) At least $1 x$ fall or spring Immersion in the principal programming functions of content development and acquisition, scheduling, and promotion. Survey of scheduling strategies and case studies, hits and misses. Research techniques to understand audience program preferences and choices.

## S.I. Newhouse School of Public Communications Faculty

Frank Biocca, Professor; Newhouse Chair; Communications; Television, Radio and Film Ph.D., University of Wisconsin-Madison, 1986 Communication research, health communications, human-computer interaction, media psychology
Lorraine Branham, Professor and Dean, Newspaper and Online Journalism
B.A., Temple University, 1976

Journalism ethics, media diversity, news management

Richard L. Breyer, Professor, Television, Radio and Film; Co-Director, Documentary Film and History M.A., New York University, 1967

Documentary, global communications, India cable television

Harriet Brown, Associate Professor, Magazine M.F.A., Brooklyn College, 1982

Magazine writing and editing, personal essay writing, body image and media, health communications, health journalism

Hubert Brown, Associate Professor, Broadcast and Digital Journalism; Associate Dean for Research, Creativity, International Initiatives and Diversity M.A., University of Nebraska at Lincoln, 1993 Minority broadcasting, journalism ethics, media and diversity, broadcast news producing

Nina Brown, Assistant Professor, Communications J.D., Cornell University, 2010

Trademark infringement, copyright, communications law

Melissa Chessher, Professor, Chair, Magazine; Director, Magazine, Newspaper and Online Journalism Program
M.A., Baylor University, 1987

Magazine writing and editing, health journalism
Fiona Chew, Professor, Television, Radio and Film Ph.D., University of Washington, 1985
Television research, the media and public health
Makana Chock, Associate Professor, Communications; Endowed Chair of Public Communications
Ph.D., Cornell University, 2004
Health communication, persuasion, risk
communication, social media effects
Michael Cremedas, Associate Professor, Broadcast and Digital Journalism
Ph.D., University of Florida, 1988
Broadcast writing, reporting, and production; viewer retention of broadcast news

Anthony D'Angelo, Professor of Practice, Public Relations
M.S. Syracuse University, 1997

Digital public relations, internal and external
communications
Mike Davis, Professor of Practice, Multimedia Photography and Design; Alexia Chair for Documentary Photography M.A., University of Missouri, Columbia, 1987 Visual storytelling, photojournalism, picture editing, global communication
Steve Davis, Associate Professor, Chair, Newspaper and Online Journalism
B.J., University of Missouri at Columbia, 1977

News writing and reporting, global
communications, journalism ethics, news coverage
Jenny Doctor, Associate Professor, Television, Radio and Film; Director, Belfer Audio Archive Ph.D., Northwestern University, 1993
Music on British radio, twentieth-century British music and cultural history, music on sound recordings
Richard Dubin, Professor of Practice, Television, Radio and Film
Television writing, directing, and production; film business; comedy
Beth Egan, Associate Professor, Advertising M.B.A, Southern Methodist University, 1990 Media and digital strategy, packaged goods, beauty and travel industry expertise

Larry Elin, Associate Professor, Television, Radio and Film
B.S., Syracuse University, 1973

Television production and interactive multimedia; writing for new media

Amy P. Falkner, Associate Professor, Advertising; Senior Associate Dean for Academic Affairs
M.A., Syracuse University, 1989

Media planning, advertising to gay and lesbian markets, social media
Rochelle L. Ford, Professor, Chair, Public Relations Ph.D., Southern Illinois University at Carbondale,
1999
Media relations, diversity and public relations, public relations research and theory

Barbara C. Fought, Associate Professor, Broadcast and Digital Journalism; Communications J.D., University of Detroit, 1992

Communications law, broadcast news writing and reporting, access to information

Aileen Gallagher, Assistant Professor, Magazine
B.A., Syracuse University, 1999

Magazine journalism, digital media, social media and journalism, blogs
Keith Giglio, Assistant Professor, Television, Radio and Film
M.F.A., New York University, 1989

Comedy writing, screenwriting, writing for video games
Seth Gitner,Associate Professor, Newspaper and Online Journalism, Multimedia Photography and Design
B.F.A. Rochester Institute of Technology, 1995 Digital journalism, multimedia journalism, visual language in communications
Tula Goenka, Associate Professor, Television, Radio and Film
M.S., Syracuse University, 1986

Filmmaking, documentary production, Bollywood and Indian cinema, media and human rights

Guy J. Golan, Associate Professor, Public Relations Ph.D. Mass Communications, University of Florida, Gainesville, 2003
Public diplomacy, international communication, political communication, media effects and public opinion
Bradley W. Gorham, Associate Professor, Chair, Communications; Director, Media Studies Program Ph.D., University of Wisconsin-Madison, 2002 Media and society; media effects; race, gender, and media

Eric Grode, Assistant Professor, Director, Goldring Arts Journalism Program
B.S., Syracuse University, 1993

Writing and editing in arts and entertainment, film criticism

Jennifer Grygiel, Assistant Professor,
Communications
A.L.M., Harvard University, 2010

Social business and emerging media, social media marketing
Roy Gutterman, Associate Professor, Communications; Newspaper and Online
Journalism; Director, Tully Center for Free Speech J.D., Syracuse University, 2000

First Amendment law, communications ethics and law, legal issues and journalism, public access to information

Ken Harper, Associate Professor, Multimedia
Photography and Design
M.A., Ohio University, 2009

Graphics and interactive design
Dona Hayes, Associate Professor, Broadcast and Digital Journalism; Co-Director, Military Program M.S., Syracuse University, 1976

Broadcast newswriting, reporting, and production
Gregory Heisler, Professor of Practice, Multimedia, Photography and Design
Portrait photography, photo essays, advertising photography, editorial photography
Keren Henderson, Assistant Professor, Broadcast and Digital Journalism
M.M.C., Louisiana State University

The relationship between the business of making news and the art of making news

Leanne Hirschfield, Research Associate Professor, Communications
Ph.D., Tufts University, 2009
Human-computer interaction, machine learning
Sharon R. Hollenback, Professor, Television, Radio
and Film
Ph.D., University of Texas at Austin, 1980
Media and society, screenwriting, media literacy
William Jasso, Professor of Practice, Public Relations
M.S., Syracuse University, 2002

Communications management, crisis communications, media relations, corporate communications

Hua Jiang, Assistant Professor, Public Relations
Ph.D., University of Maryland, College Park, 2009
Public relations management, social media and public relations, public relations research methods, internal communications
Barbara E. Jones, Professor of Practice, Television, Radio and Film
M.S., Syracuse University, 1988

Television programming, television business, interactive digital media, communications management

Joel Kaplan, Professor, Newspaper and Online Journalism; Associate Dean for Graduate Professional Studies
M.S.L., Yale Law School, 1991

Investigative reporting, media law, First Amendment law

Johanna Keller, Associate Professor, Newspaper and Online Journalism; Communications M.A., Antioch University, 1996

Arts journalism, media coverage of arts and culture, media and diversity

Dennis F. Kinsey, Professor, Public Relations; Co-Director, Public Diplomacy Program; Director, Mass Communications Ph.D. Program
Ph.D., Stanford University, 1994
Public relations theory and research, political communications, Q-methodology
Charisse L'Pree, Assistant Professor, Communications
Ph.D., University of Southern California, 2012
Media psychology, group representation and diversity, media effects, new media and behavioral change.

Carol M. Liebler, Professor, Communications Ph.D., University of Wisconsin-Madison, 1989 Communications theory and methodology, media sociology, women in media, media and diversity
Joon Soo Lim, Assistant Professor, Public Relations
Ph.D., University of Florida, 2006
Public Relations campaigns, social media
strategies, social influence and persuasion
Patricia H. Longstaff, David Levidow Professor of Communications Law and Policy, Television, Radio and Film
M.P.A., Harvard University, 1994

Communications law, entertainment law, communication policy, global communications

Suzanne Lysak, Associate Professor, Broadcast
and Digital Journalism
B.S., Boston University, 1985

Broadcast news producing, news management, television news employment issues

Stephen M. Masiclat, Professor, Newspaper and Online Journalism; Coordinator of Interactive Communications Core; Director of New Media Management Program; Co- Director of the Computational Journalism Program
M.P.S., Cornell University, 1992

Designing and developing new media, content management systems, optimizing use of new media

Lawrence Mason Jr., Professor, Multimedia Photography and Design
Ph.D., Syracuse University, 1979
Communications and society, fashion photography
John Nicholson, Professor of Practice, Broadcast
and Digital Journalism; Director, Newhouse Sports Media Center
B.S., Syracuse University, 1968

Broadcast news writing and reporting, sports communications
R. Gustav Niebuhr, Associate Professor, Newspaper and Online Journalism
M.A., Oxford University, 1980

Religion reporting, religion and politics, urban affairs, blogging

Kevin 0 'Neill, Professor of Practice, Advertising M.A., Hollins University, 1976

Creative direction, advertising criticism, brand strategy

Anne Osborne, Associate Professor, Communications
Ph.D., University of Tennessee, Knoxville, 1999
Media and identity construction, sport fandom
Dan Pacheco, Professor of Practice, Newspaper
and Online Journalism, Peter A. Horvitz Endowed Chair in Journalism Innovation
B.S., University of Colorado, 1994

Digital media and journalism, innovation in journalism, virtual reality

Michael Park, Assistant Professor, Communications
Ph.D., University of Southern California, 2014 Media law, First Amendment law, emerging media policy, sports communications, media and diversity

Simon Perez, Assistant Professor, Broadcast and Digital Journalism
M. A, Universidad Complutense, Madrid, Spain, 1991
Multimedia journalism, journalism ethics, fairness in reporting, courtroom reporting

Adam R. Peruta, Assistant Professor, Magazine M.S., Syracuse University, 2004
digital communications, web design, art direction, branding, e-commerce, programming, mobile platforms, social media

Douglas Quin, Associate Professor, Television, Radio and Film; Co-Director, Audio Arts Program Ph.D., The Union Institute and University, 1999 Audio production, music recording, sound design and recording

David M. Rubin, Professor; Dean Emeritus; Communications
Ph.D., Stanford University, 1972
Communications law, media and society, cultural and arts reporting
Edward W. Russell, Associate Professor, Advertising M.S., Northwestern, 1982

Principles of advertising, branding, new methods of persuasive communications, campaigns
Maria P. Russell, Professor, Public Relations; Director, Communications Management Independent Study Degree Program M.S., Syracuse University, 1972

Public relations management, crisis communications, media relations

Kandice Salomone, Associate Professor, Communications
Ph.D., Syracuse University, 1992
Communications research
Michael Schoonmaker, Associate Professor, Chair, Television, Radio and Film; Co-Director, Media and Education Program
Ph.D., Syracuse University, 1994
Television production, K-12 media education
James Shahin, Associate Professor, Magazine
B.A., University of Michigan, Ann Arbor, 1976

Critical writing, magazine journalism, blogs
Brian Sheehan, Associate Professor, Advertising
M.A.T., Loyola Marymount University, 2007

Branding, advertising strategy, campaigns
Pamela J. Shoemaker, John Ben Snow Professor of Communications
Ph.D., University of Wisconsin-Madison, 1982
Global communications, media effects, media sociology
Evan Smith, Professor, Television, Radio and Film M.S., Syracuse University, 1979

Television and feature film script writing, comedy writing film business

Bruce Strong, Associate Professor, Chair, Multimedia Photography and Design
M.A., Ohio University, 2005

Multimedia storytelling and the Internet, photojournalism

David C. Sutherland, Associate Professor, Multimedia Photography and Design; Co-Director, Military Program
M.B.A., Syracuse University, 1988

Photojournalism, multimedia storytelling
Corey Takahashi, Assistant Professor, Magazine B.A., University of California, Santa Cruz, 1998 Global media, culture and arts reporting, mobile apps, multimedia producing

Sherri Taylor, Adjunct Professor/Administrator, Multimedia Photography and Design; Director, Empire State Scholastic Press Association
M.A., Syracuse University, 1990

Graphic design, scholastic press
Robert J. Thompson, Trustee Professor of Television and Popular Culture; Television, Radio and Film, Director, Bleier Center for Television and Popular Culture
Ph.D., Northwestern University, 1987
Television history, media criticism, popular culture, television programming

Donald C. Torrance, Associate Professor, Broadcast and Digital Journalism; Television, Radio and Film; Director, Newhouse Environmental Science Communications Program
B.A., Alfred University, 1971

Broadcast news writing and production, television production, science journalism
James Tsao, Professor; Chair, Advertising
Ph.D., Temple University, 1989
Online advertising, international advertising, interactive branding/marketing
Christopher Tuohey, Associate Professor, Chair, Broadcast and Digital Journalism
M.A., Ohio State University, 1990

Broadcast news reporting, writing, and producing, employment issues in news

Randy Wenner, Adjunct Professor/Administrator, Broadcast and Digital Journalism
M.S., Syracuse University, 1996

Broadcast news writing, producing, and reporting
Melanie White, Assistant Professor, Advertising
B.F.A., Syracuse University, 1989

Art direction, advertising design, brand strategy

# College of Visual and Performing Arts 

Ann Clarke, Dean<br>200 Crouse College<br>http://vpa.syr.edu/

## About the College

The College of Visual and Performing Arts is dedicated to nurturing the creative and scholarly abilities of its students. The college, which is at the center of the University's cultural life, is organized into four areas: the School of Art and Design, which includes the Department of Art, the Department of Design, and the Department of Transmedia, the Department of Communication and Rhetorical Studies, the Department of Drama, and the Setnor School of Music. Recognizing the link between education, understanding, and cultural knowledge, the College of Visual and Performing Arts is also committed to providing sites for learning about diversity throughout its curricula.

## Educational Mission

The College of Visual and Performing Arts is committed to the education of cultural leaders who will engage and inspire audiences through performance, visual art, design, scholarship, and commentary. The college provides the tools for self-discovery and risk-taking in an environment that thrives on critical thought and action.

## Accreditation

The college's programs in art, design, and transmedia are accredited by the National Association of Schools of Art and Design (NASAD). In addition to NASAD accreditation, our environmental and interior design program is also accredited with the Council for Interior Design Accreditation (CIDA). The Setnor School of Music and its programs are accredited by the National Association of Schools of Music (NASM). Programs in the Department of Communication and Rhetorical Studies and the Department of Drama engage in regularly scheduled Self-Studies involving programmatic review and site visits by a panel of external reviewers from their respective disciplines.

## General Regulations

For academic rules and regulations that apply to all University students, see the Academic Rules section of this catalog, which also contains special regulations that apply to all undergraduate students matriculated in the College of Visual and Performing Arts.

## Intra-University Transfer

Applications for intra-University transfer are available in the Office of Recruitment and Admissions, 202 Crouse College. Applications are held until the end of the semester.

## Transfer Credit

Transfer of credit is considered only for courses that may be applied to the program in which the student is interested. In the School of Art and Design, Department of Drama, Department of Transmedia, and the Setnor School of Music, transfer students often have an excess of credits in academic subjects that cannot be applied to a specific program due to the high number of studio credits required. The result may be that the period of undergraduate study is extended beyond the typical four years. In the Setnor School of Music, placement examinations in music theory and applied music are also required before credit is accepted.

In all cases, transfer credit is evaluated after admission. Credits-not grades or honor points-are transferred from other institutions. Only credits earned at Syracuse University are counted in the grade point average.

## Fees

All students matriculated in a VPA major or minor are charged a program fee that covers certain expenses such as applied music instruction, specialized studio art supplies, dramatic productions, visiting artists, and equipment and technology. Non-VPA students are charged an applied music fee for private instruction and a per credit fee for other VPA courses. See the SU Tuition, Fees and Related Policies bulletin for specific charges.

## The First-Year Experience

All first-year students are assigned faculty advisors to help them plan their programs. In all five areas of the college, first-year courses and programs address the adjustment and integration of first-year students into college life. In each area, the emphasis is on small class size, one-to-one contact with faculty, the development of skills, and the personal appropriateness of each student's choice of professional pursuit.
First-year students in one of the School of Art and Design's B.F.A. art and design programs or the B.I.D. program take the foundation program, which includes both required and elective academic options. In the Department of Transmedia, the first-year student experience is designed to introduce students to studio practice, history, and theory of the media, with an emphasis on the interconnectedness of all four areas of transmedia.

In the Department of Communication and Rhetorical Studies, first-year students are part of a comprehensive introductory program led by faculty and staff, incorporating a lecture series, information meetings, alumni panels, and advising. The entire first-year class takes two courses that involve small discussion groups of approximately 20 students. In the courses, students meet with faculty and teaching assistants to address issues of concern in their discipline.

In the Department of Drama, student involvement in theatrical activity is immediate. During the first year students participate in the department's foundation program. Each week drama faculty and students gather for Wednesday Lab, which includes presentations of scenes from class, guest artists, talks with alumni, and other panel discussions.

In the Setnor School of Music, a weekly student convocation brings the entire school community together for performances by their peers, faculty, and many guest artists. In addition to many hours of individual practice, the school encourages the development of skills needed for functioning in group situations. Thus, students are required to be involved in one of the school's large ensemble groups each semester.

## Study Abroad

The College of Visual and Performing Arts recognizes the immense value that study abroad opportunities add to our students' educational experiences, and we strongly encourage all students to begin the exploration of one or more potential study abroad experiences from day one of their Syracuse University experience. A good place to start is to have conversations with your academic advisor and to visit the SUAbroad website at http://suabroad.syr.edu/, or schedule an appointment to meet with an SUAbroad advisor. Our college offers specific study abroad semester programs in Florence, London, and Strasbourg. Summer programs include Berlin, Bologna, Florence, and Venice. Short-term spring break programs include Brazil and Spain. Funding opportunities include the undergraduate Dean's Award for International Education.

## Facilities

The College of Visual and Performing Arts provides an extensive array of facilities that support our academic programs, including:
ART - extensive studio facilities in the Comstock Art Building on south campus and the Shaffer Art Building and Smith Hall on main campus. These facilities are supported by wood and metal shops. At the Comstock location, we have five studio areas. The Art Education facility includes studio
and classroom space. Our recently renovated Ceramics facility includes a state-of-the-art materials room, critique gallery, clay making room, mold/plaster room, dry and wet glaze labs, a resource room, throwing studio/classroom, sculpture studio/classroom, as well as indoor and outdoor kiln facilities (Blaauw, Geil, Anagama, and others). The Jewelry and Metalsmithing facility includes a well-equipped main studio with individual work stations, small machine and plating/anodizing rooms, plus casting, soldering, and finishing equipment. The Printmaking facility includes a 6,400 square foot studio space, housing a wide range of relief, intaglio, lithography, and letter presses, seriography/silkscreening capabilities, and hand papermaking equipment. Our Sculpture facility offers ample workspaces for assembly, project spaces dedicated to installation and performance, gallery spaces for student exhibitions, outdoor casting and largescale fabrication capabilities, and semi-private studio spaces for undergraduate students. Shaffer Art Building houses two studio programs. The Illustration facility includes studio and classroom spaces, while the Painting facility includes welllighted studios with special skylights receiving north light, and a complete workshop. Finally, Smith Hall serves as the College's graduate and multidisciplinary hub as well and home to various functions of the Schools of Art and Design and Communication and Rhetorical Studies Department.

DESIGN - Our Design programs are housed in The Nancy Cantor Warehouse, Syracuse University's seven-floor building in downtown Syracuse. The Warehouse's open, industrial space was recently renovated to contain professional studio facilities for each design program; two shared computer labs; a printing lab; and Design Works, a fabrication lab. A student lounge, café, and gallery are conveniently located on the first floor.

TRANSMEDIA - Facilities supporting the Department of Transmedia are located in the lower level of Shaffer Art Building. Art Photography students have access to digital and analog facilities, including professional scanning and digital printing equipment, and can also utilize production facilities at Light Work as well as our own studios and classrooms. The range of facilities ensures easy access to professional digital, analog, and lighting equipment, including large format ink-jet printers and a 44-inch color processor. Computer art facilities include a graduate studio, an advanced audio production and scanning studio, and a main computer lab. Art Video sports a multi-use, multi-format facility, in which production is executed with mini-DV camcorders, digital audio recorders, and necessary peripherals. Post-production suites are equipped with Macintosh-based non-linear editing systems. Video projectors are available for presentations and exhibition. There are digital,
multi-track audio studios, plus access to other Syracuse University facilities to complement production, post-production and exhibition activities. The Film Art production facilities include sync-sound camera/recorder packages: Aaton Super 16, Arriflex Super 16 and regular 16, CP16, non-sync Bolex cameras, SONY and PANASONIC DV and HDV video cameras; a broad array of location lighting and grip gear; Final Cut Pro nonlinear editing stations equipped for HD editing; Steenback flatbed editors; a sound mix studio; an Oxberry animation studio; and a lighting studio.
DRAMA - The Regent Theatre Complex, which houses the Department of Drama and Syracuse Stage, contains three theaters and a cabaret space. These four performance spaces provide the broadest range of design and staging possibilities, from conventional proscenium to theater-in-theround. Included in the complex are The John D. Archbold Theatre, a 499-seat proscenium theater; The Arthur Storch Theatre, seating up to 250 people, can be configured as a proscenium, thrust, or avenue stage; The Loft Theatre is an intimate and flexible space that seats 65 audience members in a variety of configurations, but is most often used for short plays, readings, workshops and experimental efforts; The Sutton Pavilion provides a versatile cabaret space, often for late-night entertainment for Syracuse University and the greater Syracuse communities. The complex also includes dance studios, performance/rehearsal studios, lecture rooms, seminar rooms, musical practice rooms, locker rooms, and showers - as well as the professionally staffed technical shops that build the Syracuse Stage and Department of Drama productions. Facilities adjacent to the complex provide theater design and technology studios, classrooms, and CAD lab.
MUSIC - The Setnor School of Music, located in Crouse College, is home to the acoustically rich, 700-seat Rose and Jules R. Setnor Auditorium, with its 3,823-pipe Holtkamp Organ. Approximately 200 recitals occur in this space each academic year. The school has classrooms and rehearsal spaces in Crouse College and Shaffer Art Building, as well as a recording studio in the Belfer Audio Archives.

COMMUNICATION and RHETORICAL STUDIES located in recently renovated space in Sims Hall, the department's facilities include classrooms designed for video capture and replay of student speech-making, along with multi-purpose room for hosting meetings and events.

## Research Centers and Institutes

The College of Visual and Performing Arts supports and celebrates a culture of research. Both faculty and students across departments and programs
engage in a variety of individual, group and crossdisciplinary initiatives that seek to expand human knowledge through creative analysis, innovation, and insight. These efforts are disseminated in a variety of ways including publishing, presentations, exhibitions and performances. The College's Office of Research and Graduate studies facilitates both internal and external funding to support these efforts and the colleges' mission of providing an environment that thrives on critical thought and action.

## School of Art and Design

Department of Art, 102 Shaffer Art Building, 315-443-4613
Department of Design, The Warehouse, First Floor, 315-443-2455
Department of Foundation, 222 Smith Hall, 315-443-2251
Department of Transmedia, 102 Shaffer Art Building, 315-443-1033

As a professional school within a major university, the School of Art and Design offers a wealth of academic resources and endless opportunities and activities. Students are actively involved in mastering their chosen discipline and receive a liberal education that is integral to the development of artists and designers. They have one-on-one interaction with the school's active, professional faculty and numerous visiting artists.
The School of Art and Design has a tradition of excellence that goes back more than 130 years; in fact, Syracuse University was the first university in the country to grant a bachelor of fine arts (B.F.A.) degree. Within its three departments (art, design, and transmedia), the school offers 17 majors that lead to a B.F.A. degree: art education, art photography, art video, ceramics, communications design, computer art, fashion design, film, history of art, illustration, environmental and interior design, jewelry and metalsmithing, painting, printmaking, and sculpture. It also offers a program leading to a bachelor of industrial design (B.I.D.) degree in industrial and interaction design.

School of Art and Design students are encouraged to explore interdisciplinary study within the school and University as well as pursue opportunities for internships and study abroad experiences. Students may also take advantage of the courses, programs, and events offered through COLAB, an interdisciplinary initiative based in the College of Visual and Performing Arts that encourages students and faculty to use their diverse skills and perspectives to solve complex, real-world problems creatively and collaboratively. The School of Art and Design is committed to ensuring that students receive a comprehensive education in art and design in all of their disciplinary forms.

In studio courses where students are involved in representing their own issues and identities, diversity is by nature an integral component of each class. In lecture-based studies courses, the work of underrepresented groups and issues of gender and sexual orientation are incorporated into the curricula. In addition, specific concerns of diversity are addressed in the courses listed below:

- AED 522 - Art for Special Populations
- ART 105 - Color \& Light
- ART 111 - History of Modern Art: 1850-Present
- ART 112 - Special Topics in History of Art
- ART 113 - History of Modern Design: 1850-Present
- ART 114 - Special Topics in History of Design
- ART 250 - Filmmaking: Cinematic Modes
- ART 300 - Selected Topics (e.g., Art and Politics)
- ART 361 - Studio Symposium
- ART 561 - Studio Symposium
- ART 563 - Art in America I
- ART 564 - Art in America II
- PTG 300 - Decoding Images
- EDI 553 Philosophy and Research
- IND 577 - Industrial Design: Philosophy and Ethics
- DES 248 - Design Issues


## Department of Art

## Contact

Stephanie James, Director, 102 Shaffer Art Building, 315-443-4613
The School of Art and Designís Department of Art offers an exciting, energetic culture of students who are encouraged to cross conventional boundaries with their work. They are motivated, curious, and committed to artistic growth. The department takes a genuine interest in teaching students what being a professional artist means so that they are prepared for the future. Curricula are designed to allow students to take classes within the Iarger University, which gives students exposure to the liberal arts as well as courses in business and entrepreneurship. All programs have student organizations that participate in community service projects and the selection of visiting artists, who are a critical component of the department. The department also engages in numerous educational partnerships with Syracuse schools and agencies.

# Department of Design 

## Contact

James Fathers, Director, The Warehouse, First Floor, 315-443-2455

In the Department of Design, located in the School of Art and Design, faculty and students form an inquisitive and intelligent community that is concerned with the world around it. Many of the departments' professionally oriented programs are top-ranked in the United States and have a Iong history at Syracuse University. The diverse programs in the department share a commitment to professional excellence and use of socially conscious and sustainable design practices. The department maintains a special relationship with the Syracuse community through the activities of its various student groups--including chapters of professional design organizations--that continually work on projects with not-for-profit agencies as well as funded research design collaborations. All of the departments programs are housed in The Warehouse in downtown Syracuse that allows students and faculty to benefit from a city atmosphere and interactions with local design firms.

## Department of Foundation

## Contact

Christopher Wildrick, Department of Foundation, 222 Smith Hall, 315-443-2251.
The foundation program is taken during the first year and is a prerequisite for most B.F.A. and B.I.D. programs in the departments of art and design. Students in the B.F.A. degree program in fashion design have additional specific foundation requirements and should refer to their program of study for more information.
The foundation curriculum is designed to provide the most rigorous introductory courses necessary for a complete education in art and design. The foundation year includes four required studios: Dimensional Arts, Foundation Drawing, Time Arts, and Two-Dimensional Integrated Design; two required courses in art and design history; and one required Syracuse University writing course. Students take two required studios in the fall semester and the remaining two in the spring, and one art or design history course in the fall and the other in the spring. There is no sequence in the order of the studios. The goal of these courses is to strengthen conceptual and technical abilities, promote research activity, and provide a cultural and historical context for a broader and more diverse understanding of students' ideas.

In addition to these required courses, students have choices of studio art and academic electives in both semesters. Studio electives provide students with a broad, rich experience. In addition to the special topics studio electives offered by the Department of Foundation, certain100- and 200-level studio courses are offered by the Departments of Art, Design, and Transmedia. Students take at least one academic or studio elective in the fall semester. They may also choose to take a second academic elective, but not two studio electives in the fall. In the spring semester, students are required to take one academic elective and are strongly encouraged to take a studio elective. Students may take academic electives from other areas of the University, including within the School of Art and Design.
Throughout the year, first-year students come in contact with faculty and students from all programs in the School of Art and Design, with opportunities for conversation and presentations about the different majors so they are prepared to select a major at the end of the year.

## Fall Semester

- ART 101 - First Year Colloquium
- WRT 105 - Studio 1: Practices of Academic Writing
- Academic electives/studio elective 3-6


## Choose two of the

 following:\author{

- FND 111 - Time Arts <br> - FND 113 - Foundation Drawing <br> - FND 115 -Two-Dimensional Creative Processes <br> - FND 117 - Dimensional Arts
}


## Choose one of the following:

- ART 111 - History of Modern Art: 1850-Present
- ART 113 - History of Modern Design: 1850-Present

Total Credits: 16

## Spring Semester

- Academic elective 3 credit(s)
- Academic/studio elective(s) 3-6 credit(s)


# Choose the remaining two not taken in the fall semester: 

\author{

- FND 111 - Time Arts
}
- FND 113 - Foundation Drawing
- FND 115 -Two-Dimensional Creative Processes
- FND 117 - Dimensional Arts


## Choose remaining one not taken in fall semester:

- ART 111 - History of Modern Art: 1850-Present
- ART 113 - History of Modern Design: 1850-Present


## Total Credits: 15

# University Requirement 


#### Abstract

Although not a foundation requirement, it is a University requirement, and should be taken within the first two years of study. It is offered only in the spring semester.


- WRT 205 - Studio 2: Critical Research and Writing


## Department of Transmedia Contact

Heath Hanlin, Chair, 102 Shaffer Art Building, 315-443-1033

Students in the School of Art and Designís Department of Transmedia forge a strong vision and the capacity to act intelligently as an artist. The department is committed to providing a meaningful exploration of media arts with strong, professional artistic practice. Each curriculum in the department is shaped to offer greater flexibility for unique academic experiences, including core courses in transmedia theory and practices. Faculty encourage students to exhibit work on and off campus and arrange for visiting artists to give lectures and critiques. They are also actively involved in the Syracuse community, organizing screenings, film festivals, and exhibitions, which give students additional opportunities for creative exploration and involvement.

# General Regulations 

## Degree Requirements

A minimum of 126 credits is required to complete all of the four-year B.F.A. degree programs in the School of Art and Design except for Fashion Design and Environmental and Interior Design, which requires 120 credits. The industrial and interaction design program requires a full five years of study and 156 credits. For the B.F.A. programs in the Department of Transmedia, the minimum number of credits required for graduation is 129.

All students matriculated in the Departments of Art and Designís B.F.A. and B.I.D. degree programs must satisfy their program's foundation requirements. Major programs are usually selected by the end of the first year and require approximately 30 credits in one area of professional work, along with other coursework that may be required for the chosen program. Students in the B.F.A. program in fashion design should refer to their specific program of study for major requirements and other coursework.

All students matriculated in the B.F.A. degree programs in the Department of Transmedia must satisfy the requirements of the transmedia core.

No degrees are granted unless all fees have been paid or satisfactorily adjusted.

## Advanced Placement Courses

The School of Art and Design accepts advanced placement (AP) credit for art/general, art/media and art/drawing for electives only. AP credits may not be used for first-year foundation program studios or transmedia core courses. Syracuse University and the School of Art and Design accept many other academic credits including art history. Please refer to the Academic Rules section of this catalog for more information.

## Special Services and Programs

## Study Abroad

The College of Visual and Performing Arts, through Syracuse University Abroad, provides an opportunity for students matriculated in the School of Art and Design to take advantage of study programs in Florence, Italy; Prague, Czech Republic; and London, England.
Students majoring in one of the B.F.A. programs or the B.I.D. program may study abroad for a semester, a year, or a summer in London and Florence. This educational experience draws upon the rich resources of these cities' museums, architectural monuments, and cultural offerings.

Students may take either a semester- or a yearlong program that includes six to nine credits of studio work each semester.
The film program offers both semester-long and short-term study with FAMU in Prague, Czech Republic. Students must obtain departmental approval to participate.
A direct placement program with the London College of Fashion offers students majoring in the B.F.A. program in fashion design a professional semester in London during their junior year. In addition to classes they would normally take on the SU campus, students may take courses in such areas as millinery design, shoe design, and electronic machine embroidery. All of the students have internships with English designers and are immersed in the London fashion scene. Contact SU Abroad at 315-443-3471, or online at suabroad.syr.edu.
Students who elect to spend a semester abroad may find that some program adjustments are necessary. Students should consult with their advisor for more information and contact the Office of Student Affairs, 200 Crouse College, 315-443-2517.

## Special Studies in Art

The special studies in art program leads to the B.F.A. degree and is designed expressly for interdisciplinary study. The program is not automatically available; it must be mutually approved by the advisors in the various areas incorporated into the program. All applicants must undergo a personal interview and a portfolio review. In addition, a written proposal for the complete program of study is required, including specific courses and credits. Students are expected to complete the foundation program, and sophomores must have a 3.0 cumulative grade point average and a portfolio of superior caliber to be accepted. The decision to enroll in the special studies program must be made before the student accumulates 60 credits.

For further information and instructions for application, contact the Department of Art, 102 Shaffer Art Building, 315-443-4613

## Courses for Non-Art Students:

Some studio and academic courses are open to non-art majors: PTG 203/PTG 204, PTG 503/PTG 504, SCU 207, SCU 208, SCU 507, SCU 508.

## Major

Art Education, BFA
Art Education Program Information

## Contact:

James Rolling Jr, Department of Art ComArt Building, 315-443-3700, jrolling@syr.edu
School of Education contacts: Academic Advisors, 111 Waverly Avenue, Suite 230, 315-443-9319.

College of Visual \& Performing Arts contact: Michele Buza, 200 Crouse College, 315-4432517

## Faculty

Shariff Bey, James Rolling Jr
The Bachelor of Fine Arts (B.F.A.) degree program in art education emphasizes the studio arts as an exploration of the ideas, materials, and aesthetics through which we shape meanings, negotiate identity and organize society. Students will obtain an expertise in the development of arts-based and design-oriented curricula linked to national and New York State learning standards for the visual arts and promoting multi-literacies, inclusivity, critical inquiry and social responsibility.
In this program, students dually enroll in the College of Visual and Performing Arts and the School of Education. Studio arts courses and interdisciplinary electives are encouraged in combination with educational theory and cultural foundations as students prepare to be professional teachers of art. At a minimum, the B.F.A. degree in art education can be earned with the satisfactory completion of 130 credits.
In the junior year of the program, students have the opportunity to teach art lessons to children ages 5 to 15 in weekly workshops that prepare them for student teaching in local schools in their senior year. The Syracuse University Student Art Education Association, a chapter of the National Art Education Association, is open to both undergraduate and graduate students in art education. This organization is dedicated to offering pre-service art teachers, as well as any interested art and pre-service education students, opportunities to enrich their pedagogical practice by facilitating social and networking opportunities for professional development, hosting guest speakers, and promoting and practicing outreach and community service through the arts.
After going through the application process and passing the requisite New York State exams (or state-specific certification exam requirements and other requirements, if you plan to teach in another state), you will be eligible for initial certification as an art teacher in all grades. Career services are available through the School of Education.

Major Requirements: 61 credits

[^13]- FND Studio (x4) 3 credits each
- FND 114 - Special Topics in Foundation Drawing
- AED 211 - The Creative Classroom: Reexamining School Art Misconceptions Through Studio Inquiry
- AED 317 - Philosophy \& Foundations of Art Education Practice
- AED 510 - Special Problems in Art Ed
- EDU 204 - Principles of Learning in Inclusive Classrooms
- EDU 301 - Methods and Practice in Teaching Art
- EDU 302 - Methods and Curriculum in Teaching Art
- EDU 304 - Study of Teaching
- EDU 508 - Student Teaching
- RED 326 - Literacy Across the Curriculum
- SED 340 - Participation in the Professional Development School


## Art History Requirements: 12 credits

- HOA 105 - Arts and Ideas I
- HOA 106 - Arts and Ideas II
- ART 340 - Visiting Artist Lecture Series (x3) 1 credit each
- Art History/Theory Elective 3 credits


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 15 credits

## Mathematics (3 credits)

- MAT 117 - Foundational Mathematics via Problem Solving I or higher

Natural Science (3 credits)
Humanities (3 credits)
Social Sciences (3 credits)
Foreign Language (3 credits)
Studio Electives: 36 credits

## Note:

Consult with the School of Education, 111 Waverly

Avenue, suite 230, regarding other New York State requirements for graduation and certification.

## Art Photography, BFA

## Contacts

Laura Heyman, Department of Transmedia 102 Shaffer Art Building, 315-443-1033, Iheyman@syr.edu

## Faculty

Yasser Aggour, Doug DuBois, Laura Heyman, Edward Morris, Susannah Sayler

## Description

This B.F.A. degree program is designed for art students who wish to use photography as their primary creative medium. The program allows students to examine both traditional and contemporary aspects of fine art photography. Coursework provides thorough training in black-and-white, color, digital photography, and lighting. Special emphasis is placed on critique and the study of photographic history, criticism, and contemporary models. Work is encouraged in contemporary media, such as computer imaging, film, and video, as well as studies in art history and printmaking. Students who are interested in advertising and related fields often select electives in communications design.
Excellent facilities include black-and-white and color darkrooms. Digital facilities include: film scanners, archival inkjet printers and computers stations for image editing. Digital SLR's, medium and large format film cameras, and an extensive array of lighting equipment are available for check out. A shooting studio is equipped for all formats of digital and analog photography.
Undergraduate students also benefit from the department's close association with Light Work, a nonprofit organization on campus that sponsors and internationally renowned visiting artist program and exhibitions in the Robert B. Menschel Photography Gallery. In addition, the Department of Transmedia maintains its own gallery space for exhibitions and events, organized by graduate and undergraduate students.

## Program Requirements

## Major Requirements: 48 credits

- APH 261 - Art Photography, Introduction
- APH 262 - Art Photography Introduction II
- APH 263 - Art Photography:Advanced Digital Imaging

APH 361 - Lighting for Photography

- APH 362 - Art Photography Junior Seminar
- APH 461 - Art Photography:BFA Senior Seminar
- APH 462 - Art Photography: BFA Exhibition and Portfolio
- TRM 151 - TransMedia Colloquium (History)
- TRM 152 - TransMedia Colloquium (Theory)
- TRM 153 - Studio Concepts
- TRM 154 - Interconnected Studios
- TRM 251 - Intermediate TransMedia Studio
- TRM 351 - Advanced Tramsedia Studio
- TRM 451 - TransMedia Synthesis

Choose one of the following:

- APH 561 - Art Photography: Contemporary Art and Photography
- APH 562 - Art Photography: Contemporary Critical \& Theoretical Texts on Art \& Photography
Required Elective: Choose one of the following:
- APH 563 - Art Photography: Non-Traditional Modes
- APH 564 - Image/Sequence: Photo Book
- APH 565 - Art Photography: Performance Art
- APH 566 - Art Photography: Photography and Cinema


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing

Studies in Culture: 21 credits
Academic Electives: 30 credits
Studio Electives: 24 credits

## Total Credits Required: 129

Degree Awarded: BFA in Art
Photography

## Art Video, BFA

## Contact

Tom Sherman, Department of Transmedia 102 Shaffer Art Building, 315-443-1033, twsherma@syr.edu

## Faculty

Cooper Battersby, Tom Sherman, Emily Vey Duke

## Description

The art video degree program addresses video as a medium for making contemporary art. This B.F.A. degree major emphasizes conceptual development and video design skills grounded in advanced production and post-production studio work. Within the context of the Department of Transmedia, The video option encourages a multidisciplinary approach to video, providing opportunities for students to interact with fellow students majoring in art photography, computer art, and film. Art video majors are immersed in the history and theory of moving image/sound relationships so that their work is informed and strengthened.
Art video maintains an active visiting artists program and one of the best collections of artists' video in the United States. Students investigate the many ways video technology is used creatively today: as single channel works challenging the conventions of narrative and documentary form; as a visual art form integrating computergenerated images, audio experimentation, and performance art; as a primary source of creative content for the World Wide Web and as a sculptural medium used in site-specific installations. Beginning courses examine technical principles, and assignments introduce students to the video medium's complex nature and potential power. At first, students develop ideas with their instructors, but in the junior and senior years, their work becomes increasingly self-directed. The goal is the emergence of independent, personally motivated work.

The art video program is supported by a multipleformat video facility. Production equipment includes mini-DV camcorders, digital audio field recorders, and necessary peripherals. Postproduction suites include digital non-linear editing systems; multi-format, multi-standard dubbing stations; dedicated, digital, non-linear audio-to-video suites; a large green-screen shooting stage; and access to other University facilities that further complement post-production work.
This major is designed to prepare students for careers in video art (a multidisciplinary field focused on creative video information design).
In addition to becoming independent video artists, art video graduates may become specialists in a growing number of professional sectors, including music video and World Wide Web content provision, and production and post-production for the education, training, publishing, and entertainment industries, forensic, environmental and political media analysis, as well as in-house video producers for major corporations in the

## Program Requirements

Major Requirements: 48 credits

- TRM 151 - TransMedia Colloquium (History)
- TRM 152 - TransMedia Colloquium (Theory)
- TRM 153 - Studio Concepts
- TRM 154 - Interconnected Studios
- TRM 251 - Intermediate TransMedia Studio
- TRM 351 - Advanced Tramsedia Studio
- TRM 451 - TransMedia Synthesis
- VID 211 - Video Sketchbook
- VID 212 - Intro Art Video
- VID 310 - Studies in Art Video
- VID 311 - Intermediate Art Video
- VID 312 - Intermediate Art Video II
- VID 313 - Advanced Post-Production Techniques
- VID 411 - Advanced Art Video
- VID 412 - Art Video:Thesis Project
- VID 510 - Video Art History

Academic Requirements: 6 credits
WRT 105 - Studio 1: Practices of Academic Writing

- WRT 205 - Studio 2: Critical Research and Writing

Studies in Culture: 21 credits
Academic Electives: 30 credits
Studio Electives: 24 credits
Total Credits Required: 129
Degree Awarded: BFA in Art Video

Arts and Sciences/Art, BA
Arts and Sciences/Art

## Contact:

Romita Ray, Art and Music Histories
Suite 308 Bowne Hall
315-443-5030
To arrange a required portfolio review: Office of Recruitment, College of Visual and Performing Arts, 202 Crouse College, 315-443-2769.

Coordinator for College of Visual and Performing Arts: TBA

## Art faculty:

See "Faculty, College of Visual and Performing Arts, School of Art and Design"

The special options degree program in arts and sciences/art is designed for students who wish to include studio arts in conjunction with studies in humanities and/or sciences. The option permits any major in the College of Arts and Sciences to be joined with studio arts work. The degree awarded at the completion of undergraduate study is a B.A. in the arts and sciences major with the supplementary designation "and art." The degree is singly awarded by the College of Arts and Sciences.

## Requirements

Under no circumstances will students be permitted to enter this special program after they have completed the first semester of their sophomore year. A portfolio is required for admission into the program.

## Arts and Sciences Requirements

At least 9 credits must be completed in the College of Arts and Sciences (including the arts and sciences core, usually 60 credits). Students also complete an arts and sciences major (usually 30 credits) including 6 credits of upper-division art history.

## School of Art and Design Requirements

The 30 -credit option involves 15 credits of introductory design, drawing, and painting, followed by 15 elective credits in painting, drawing, fiber arts, ceramics, and/or sculpture.

## Basic Design: 6 credits

- FND 115 - Two-Dimensional Creative Processes
- FND 117 - Dimensional Arts

Drawing: 6 credits

- FND 113 - Foundation Drawing
- FND 114 - Special Topics in Foundation Drawing


## Painting: 3 credits

- PTG 203 - Painting and Drawing for Non-Art Majors
- PTG 204 - Painting and Drawing for Non-Art Majors

Studio Arts Electives: 15 credits

## Additional Information

All FND (Foundation) course requirements (12 credits) must be completed within the first 3 semesters of enrollment in the program. Moreover, students must complete at least 9 credits of their 12-credit FND requirements BEFORE they will be allowed to enroll in upper-level courses.

There is no provision for advanced work in nonstudio areas of the School of Art and Design, leading to degrees such as the B.F.A. or B.L.D.

## Ceramics, BFA

## Contact

Errol Willet, Department of Art
102 Shaffer Art Building, 315-443-4613, eswillet@syr.edu

## Faculty

Peter Beasecker, Margie Hughto, Errol Willett

## Description

Our bachelor of fine arts (B.F.A.) degree program in ceramics helps you become a professional ceramist. We encourage you to explore several directions: pottery, sculpture, tile mosaics, and other areas as you focus on the specialty that interests you most.

## Program Requirements

## Required Courses: 45 credits

- FND Studio (x4) 3 credits each
- CER 221 - Introduction to Ceramics
- CER 222 - Introduction to Ceramics
- CER 223 - Intro Ceramic Wheel Throwing
- CER 224 - Intro Ceramic Wheel Throwing
- CER 327 - Clay \& Glaze Technology
- CER 328 - Clay \& Glaze Technology

Choose one of the following:

- CER 321 - Intermediate Ceramic Sculpture
- CER 323 - Intermediate Wheel Throwing

Choose one of the following:

- CER 322 - Intermediate Ceramic Sculpture
- CER 324 - Intermediate Wheel Throwing

Choose one of the following:

- CER 421 - Advanced Ceramic Sculpture
- CER 423 - Advanced Wheel Throwing

Choose one of the following:

- CER 422 - Advanced Ceramic Sculpture
- CER 424 - Advanced Wheel Throwing
- Ceramics Elective (3 credits)


## Art History Requirements: 15 credits

- Art/Design History Requirement (x2) (3 credits each)
- Art/Design History Elective (x3) (3 credits each)

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 21 credits
Studio Electives: 30 credits
Free Electives: 9 credits
Total Credits 126
Degree Awarded: BFA in Ceramics

Communications Design, BFA

## Contact

Roderick Martinez, Department of Design
The Warehouse, 315-443-2455, rmmartin@syr. edu

## Faculty

Robert Cooney, Michele Damato, Jeff Glendenning, Roderick Martinez, William Padgett

## Description

This B.F.A. degree program introduces a field offering almost unlimited options and professional opportunities. Its unique structure enables students to pursue either a broad range of interests or to specialize in one or two particular areas of communications design. Corporate graphics and identity systems, advertising, packaging, environmental graphics, exhibition design, direct mail and direct response marketing, magazine or book design, television and film graphics, and electronic and interactive media are some of the most common areas of study. The program is designed to accommodate almost any relevant interest.

The courses emphasize, above all else, the
conceptual and strategic aspects of marketing and communications design as well as the development of basic skills, the use of technology, and the historical and theoretical foundations of the field.

## Program Requirements

Major Requirements: 51 credits

- DES 101 - Design Concepts
- DES 102 - Design Applications
- DES 103 - Introduction to Design Thinking
- CMD 104 - Fundamentals of Communications Design
- CMD 251 - Intro Communication Design I
- CMD 252 - Intro Communication Design II
- CMD 281 - Design Methods
- CMD 282 - Design Skills \& Processes
- CMD 351 - Problem Solving Strategies
- CMD 352 - Design Project Management
- CMD 450 - Communication Design Problems (x2) 3 credits each
- CMD 450 - Communication Design Problems (x2) 6 credits each
- CMD 452 - Portfolio \& Practice

Art History Requirements: 13 credits

- ART 113 - History of Modern Design: 1850-Present
- DES 201 - Design, Cultural Traditions and the Environment
- DES 281 - Design Symposium (x4) 1 credit each
- Art/Design History Elective 3 credits


## Academic Requirements: 6 credits

WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing

## Academic Electives 24 credits

## Studio Electives 18 credits

## Free Electives 9 credits

## Study Abroad

Students may apply to spend a semester abroad in the spring of their junior year at SU's Design in London program. Please refer to the SUAbroad
website for eligibility and application criteria.
Total Credits Required: 121
Degree Awarded: BFA in Communications Design

Computer Art and Animation, BFA

## Contact:

Annina Ruest, Department of Transmedia 102 Shaffer Art Building, 315-443-1033, arust@ syr.edu

## Faculty

Heath Hanlin, Kara Herold, Annina Ruest

## Description

The Bachelor of Fine Arts (B.F.A.) degree program in Computer Art and Animation is dedicated to exploring the possibilities of digital media within a fine art, exploratory, and culturally aware setting. Through instruction in 3D computer animation, electronic object creation, code-based art, sound design, and sonic art, students are mentored to become highly skilled critical thinkers producing art in individual and collaborative contexts.
In your first year, you build a strong foundation for working within the digital realm while developing an artistic voice engaged in the language of the medium. During the second year we investigate the diverse possibilities of computer art, the intensity of which is oriented by the inclination of the student and tailored through mentorship. In the third and fourth years, we bring these skills into creative focus, demanding a professional art practice that is both technically sophisticated and critically engaged.

Within the Department of Transmedia, computer art is integrated with film, art video, and art photography, allowing for a practice that is tightly focused but free to traverse a network of related disciplines. This network expands into the rest of Syracuse University, challenging you to further develop the intellectual resources needed to inform your work. Through this process you synthesize a perspective that is shaped within a web of mutual influence and discourse.

Celebrating its 30th year, the computer art program boasts alumni who are placed at some of the most prestigious animation and visual effects companies in the world-Pixar, Rhythm and Hues, Industrial Light and Magic, Lucasarts, Blizzard, Tippett Studios, Motion Picture Company, and Sony Pictures Imageworks-along with creative
representation at galleries and media art festivals internationally. The program's alumni and faculty have consistently pushed the edge publicly as to what it means to be a computer artist and continue to maintain that intensity today.

## Program Requirements

## Major Requirements: 42 credits

- TRM 151 - TransMedia Colloquium (History)
- TRM 152 - TransMedia Colloquium (Theory)
- TRM 153 - Studio Concepts
- TRM 154 - Interconnected Studios
- TRM 251 - Intermediate TransMedia Studio
- TRM 316 - Introduction to Visual Culture
- TRM 351 - Advanced Tramsedia Studio
- TRM 451 - TransMedia Synthesis
- CAR 101 - Introduction to 3D Animation and Visual Effects
- CAR 111 - Introduction to Programming for Visual and Networked Art
- CAR 201 - Intermediate 3D Animation and Visual Effects
- CAR 211 - Introduction to Electronics and electronic Object Making for Art
- CAR 241 - Audio Production and Recording I
- CAR 432 - Senior Project


## Menued Major Studios: 12 credits

Choose FOUR from the following:

- CAR 120 - Experimental Animation
- CAR 301 - Advanced 3D Animation and Visual Effects
- CAR 302 - Previz and Character Development for Animation
- CAR 415 - History of Animation
- CAR 230 - Topics in Computer Gaming I
- CAR 330 - Topics in Computer Gaming II
- CAR 520 - Topics in Electronic Environments
- CAR 401 - Animation Workshop I
- CAR 402 - Visual Effects Workshop I
- CAR 501 - Animation Workshop II
- CAR 502 - Visual Effects Workshop II
- CAR 341 - Audio Production and Recording II
- CAR 530 - Special Topics in Computer Art

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing

## Academic Electives: 18 credits

Menued Studies in Culture*: 12 credits

Free Studies in Culture: 9 credits
Menued Studio Electives*: 12 credits

Free Studio Electives: 9 credits

* NOTE: department will supply a list of *menued courses


## Total Credits Required: 120

Degree Awarded: BFA in Computer Art and Animation

Environmental and Interior Design, BFA

## Contact

Gregory Marinic, Department of Design The Warehouse, 315-443-2455,

## Faculty

Zoriana Dunham, Dennis Earle, Lucinda Havenhand, Matthew Leonard, Gregory Marinic, Sarah Redmore

## Description

Through the exploration of the art and architecture of environmental design, students solve problems in a broad range of built environments. Students work closely with faculty in a studio environment similar to the professional design office experience. The curriculum and projects support the professional, multidisciplinary philosophy and foster the creation of humane, sustainable environments for people. Visualization and communications skills, as well as a strong technical component, provide a basis for the education of designers who will become creative problem solvers and leaders in various fields of interior design.

Students receive a broad liberal arts education in conjunction with studio courses in fine arts and crafts to complement their work in environmental and interior design. A sensitivity to the concerns of people, sustainable design practices and an understanding of the business of design
contribute to their overall competence. Individual work experiences and actual and collaborative projects in the community and with industry expose students to current and future issues.

The program shares courses, design laboratories, and studios with other disciplines in the Department of Design and a close relationship with professional designers, design societies, and manufacturers. Students and the program have received many national and international design awards. The program is accredited by the Council for Interior Design Accreditation (CIDA).
Prospective students without art and design backgrounds and portfolios may apply directly to the program and matriculate through the freshman EDI curriculum.

## Program Requirements

## Major Requirements: 57 credits

- DES 101 - Design Concepts
- DES 102 - Design Applications
- DES 103 - Introduction to Design Thinking
- DES 201 - Design, Cultural Traditions and the Environment
- DES 248 - Design Issues
- EDI 104 - Fundamentals of Environmental + Interior Design
- EDI 144 - Drafting for Designers
- EDI 251 - Environmental Design I
- EDI 252 - Environmental Design II
- EDI 253 - Design Presentation and Techniques I
- EDI 254 - Design Presentation and Techniques II
- EDI 351 - Environmental Design III
- EDI 352 - Environmental Design Directed Research
- EDI 353 - Environmental Factors
- EDI 354 - Professional Practice for Designers
- EDI 451 - Environmental Design Focus Studio
- EDI 452 - Environmental Design Thesis Studio
- EDI 453 - Thesis Prep and Research
- EDI 454 - Environmental Design Portfolio

Art History Requirements: 12 credits

- ART 113 - History of Modern Design: 1850-Present

DES 201 - Design, Cultural Traditions and the Environment

- DES 281 - Design Symposium
- Art/Design History Elective 3 credits

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Required Electives: 6 credits
Choose TWO from the following:

- ACC 201 - Essentials of Accounting
- CRS 225 - Public Advocacy
- CRS 316 - Introduction to Visual Culture
- CRS 325 - Presentational Speaking
- DES 267 - Textiles for Designers
- DES 300 - Selected Topics
- DES 341 - Fabrication Skills and Methods
- DES 342 - Computer Generated Fabrication
- DES 561 - Furniture and Light Workshop
- DES 562 - Advanced Detailing and Construction
- EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
- FIN 301 - Essentials of Finance


## Academic Electives: 15 credits

## Studio Electives: 15 credits

## Free Electives 9 credits

## Study Abroad

Students are encouraged to spend a semester abroad in their junior year at SU's Design in London program or working on special projects and internships in Syracuse and around the world. Please refer to the SUAbroad website for eligibility and application criteria.

## Total Credits Required: 120

Degree Awarded: BFA in Environmental and Interior Design

Fashion Design, BFA

## Contact

Todd Conover, Department of Design, The Warehouse,315-443-2455, tdconove@syr.edu

## Faculty

Todd Conover, Eileen Gosson, Jeffrey Mayer, Nguyen Long Nam To

## Description

The curriculum of the B.F.A. degree program in Fashion Design includes the basic skills of construction, flat pattern, draping, and presentation, all with an emphasis on design. Important related topics include textiles, fashion drawing, fashion marketing, and computerassisted design. Students learn to develop their ideas on paper, then translate them through pattern skills into three-dimensional forms and, finally, into finished designs. Academic requirements and electives balance studio and didactic courses each semester.

## Program Requirements

## Major Requirements: 54 credits

- DES 101 - Design Concepts
- DES 102 - Design Applications
- DES 103 - Introduction to Design Thinking
- DES 267 - Textiles for Designers
- FAS 104 - Fundamentals of Fashion Design
- FAS 120 - Fashion Skills and Techniques I
- FAS 121 - Fashion Skills and Techniques II
- FAS 222 - Fashion Skills and Techniques III
- FAS 223 - Fashion Skills and Techniques IV
- FAS 231 - Fashion Design Studio I
- FAS 232 - Fashion Design Studio II
- FAS 301 - Digital Presentation for Fashion Design
- FAS 322 - Fashion Design: Tailoring
- FAS 323 - Fashion Design: Accessory Design
- FAS 332 - Fashion Design Studio III
- FAS 333 - Fashion Design Studio IV
- FAS 422 - Fashion Design: Senior Collection I
- FAS 423 - Fashion Design: Senior Collection II


## Art History Requirements: 13 credits

- ART 113 - History of Modern Design: 1850-Present
- DES 201 - Design, Cultural Traditions and the Environment
- DES 281 - Design Symposium
- FAS 335 - History of Fashion Design I: Origins and Revivals
- FAS 336 - History of Fashion Design II: Contemporary Trends


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing


## Academic Electives: 21 credits

- Six credits must be in FAS courses


## Studio Electives: 27 credits

- Six credits must be in TXT courses


## Study Abroad

The fashion design program has connections with the London College of Fashion. Students may apply, and pending a successful application and meeting program requirements, spend a semester abroad in this program during their junior year. Please refer to the SUAbroad website for eligibility and application criteria.

## Total Credits Required: 121

Degree Awarded: BFA in Fashion Design

Film, BFA

## Contact

Owen Shapiro, Department of Transmedia 102 Shaffer Art Building, 315-443-1033, ojshapir@syr.edu

## Faculty

Boryana Dragoeva, Kara Herold, Alexis Mendez, June Kyu Park, Vasilios Papaioannu, Owen Shapiro, Miso Suchy, Ruige Xu

## Description

The main objective and educational mission of our film program is to provide a stimulating and rewarding context for independent filmmaking and scholarship. The film program places equal emphasis on academic film studies and creative production. Students pursue various modes of production, including experimental, narrative, documentary, and animation and are required to take film history, theory and criticism classes.

Our approach is that of the total filmmaker.
The primary focus of the program is to foster creative, intellectual, and personal achievement. Students learn everything from scriptwriting to
pre-production, production, and post- production. Learning how to develop interpersonal and leadership skills is an important part of the process. The program encourages independence, debate, and originality. Our approach to film is an aesthetic one rather than a commercial enterprise.

The first two years of the program are rigorously structured. Freshmen follow Transmedia core curriculum, including film history and an introductory film production course. Sophomore classes concentrate on the essential filmmaking skills. Juniors and seniors have more flexibility. Students choose from menu-structured courses according to their academic and professional interests, in essence constructing their own path with their faculty advisor.
Students must participate in a portfolio review, which is held at the end of each semester. The student and faculty members evaluate creative and academic work and assess student progress. Sophomore Review will result in a recommendation to continue or to not continue in the program.

In addition to the core study and study abroad options, students have various opportunities for involvement with the Syracuse International Film Festival, the Dropped Frame Society (a studentrun film organization), and are encouraged to seek internships. Each year, two of our film seniors participate in the "Sorkin Week," a week-long professional sojourn in Los Angeles, California.
The program maintains full facilities for 16 mm , super 16 mm , and digital video formats, including HD.

Our students go on to become independent filmmakers and educators, and work in a wide variety of media-related fields.

## Program Requirements

## Major Requirements: 48 credits

- TRM 151 - TransMedia Colloquium (History)
- TRM 152 - TransMedia Colloquium (Theory)
- TRM 153 - Studio Concepts
- TRM 154 - Interconnected Studios
- TRM 251 - Intermediate TransMedia Studio
- TRM 351 - Advanced Tramsedia Studio
- TRM 451 - TransMedia Synthesis
- FIL 122 - Sound/Image
- FIL 221 - Cinematic Modes of Production
- FIL 223 - Filmmaking: Storytelling Production
- FIL 225 - Problems of Film Perception
- FIL 226 - Survey of Film Theory
- FIL 228 - Film Scriptwriting
- FIL 420 - Filmmaking:Senior Project (Semester I)

FIL 420 - Filmmaking:Senior Project (Semester II)

## Film Required Electives: 12 credits <br> Choose FOUR from the following:

- FIL 222 - Post-Production Workshop
- FIL 321 - Filmmaking:Animation
- FIL 322 - Cinematic Modes Workshop
- FIL 324 - Scriptwriting Workshop
- FIL 329 - Sound Design
- FIL 521 - Filmmaking: Selected Topics Cinematography
- FIL 521 - Filmmaking: Selected Topics Editing
- FIL 523 - Cinema Acting\&Directing

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Studies in Culture: 21 credits
Academic Electives: 42 credits
Studio Electives 18 credits

## Study Abroad

This structure of the program permits students to study abroad for one semester in any of the SUAbroad locations. The film program also offers both semester-long and short-term study programs with FAMU in Prague.

Total Credits Required: 129
Degree Awarded: BFA in Film
History of Art, BFA

## Contact

Judith Meighan, Department of Art 102 Shaffer Art Building, 315-443-4613, jemeigha@syr.edu

## Faculty

Judith Meighan

## Description

The interdisciplinary program in the history of
art integrates studio experience with study of the history, theory, and aesthetics of the visual arts. Intended for students who have taken basic studio courses in drawing, painting, and design but who do not wish to specialize in one of the professional studio fields, it offers a diversified course of study in history and related academic concerns.

The program examines art as an expression of experience in different periods and cultures, from prehistoric to contemporary. Students may develop an area of specialization in a topic that interests them, such as a period (Middle Ages, Age of Romanticism, Industrial Age), a stylistic movement (Baroque, Impressionism, Abstract Impressionism), a medium (decorative arts, architecture), a focus based on geography (American art, art of the northern Renaissance), or a combination of all four.
For study in the history of art, students may choose art history courses above the 299 level offered in the College of Visual and Performing Arts listed with an ART prefix, or courses in the art history major offered by the Department of Fine Arts in the College of Arts and Sciences, which are listed with a FIA prefix. History of art majors may also choose courses from other undergraduate colleges within the University.

## Program Requirements

Major Requirements: 51 credits

- FND Studio (x4) 3 credits each
- HOA/ART electives (x13) 3 credits each

Art History Requirements: 9 credits

- ART 111 - History of Modern Art: 1850-Present
- ART 113 - History of Modern Design: 1850-Present
- ART 340 - Visiting Artist Lecture Series

Academic Requirements: 9 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing
- WRT 307 - Advanced Writing Studio: Professional Writing

Academic Electives: 21 credits
Studio Electives: 30 credits
Free Electives 9 credits
Total Credits Required: 126

Degree Awarded: BFA in History
of Art
Illustration, BFA

## Contact

Martha Blake, Department of Art
102 Shaffer Art Building, 315-443-4613, mablake@syr.edu

## Faculty

Martha Blake, Yvonne Buchanan, Robert Dacey, James Ransome, John Thompson

## Program Description

Using visual symbols and imagination, illustrators stimulate curiosity and interest, tell stories, illuminate, and motivate. Therefore, students in the illustration program must be able to draw and to communicate exceptionally well with visual images.
The curriculum, which leads to a B.F.A. degree, is centered on a series of studio courses covering figure drawing, drawing for reproduction, illustration concepts, and the history and development of illustration. At the same time, students embark on individual research projects in specialized areas of illustration. The program balances imagination and individual expression with the continuous development of skills in drawing, painting, digital media, and design as they apply to the communication arts. The program in illustration requires 126 credits.

## Program Requirements

Major Requirements: 51 credits

- FND Studio (x4) 3 credits each
- ILL 261 - Introduction to Illustration
- ILL 262 - Introduction to Illustration
- ILL 283 - Media Arts
- ILL 284 - Media Arts Techniques
- ILL 361 - Intermediate Illustration
- ILL 362 - Illustration Principles
- ILL 363 - Illustration Research Problems
- ILL 364 - Illustration Research Problems
- ILL 461 - Senior Portfolio
- ILL 462 - Senior Portfolio
- ILL 483 - The Business of Freelance Illustration
- ILL 561 - Illustration Concept
- ILL 562 - Illustration Concept


## Art History Requirements: 15 credits

- Art/Design History Requirement (x2) 3 credits each
- Art/Design History Elective (x2) 3 credits each
- ILL 281 - Illustration Symposium (x3)


## Academic Requirements: 9 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
- ENG Elective 3 credits

Academic Electives: 18 credits
Studio Electives: 24 credits
Free Electives: 9 credits
Total Credits Required: 126
Degree Awarded: BFA in
Illustration
Industrial and Interaction
Design, BID

## Contact

James Fathers, Department of Design The Warehouse, 315-443-2455, jwfather@syr.edu

## Faculty

Donald Carr, James Fathers, Denise Heckman, Patricia Johnson, Dianna Miller, Ralf Schneider

## Description

Industrial designers develop a wide spectrum of design solutions that meet current demands and anticipate the future needs of society. Their designs must incorporate the effective use of materials and technology, allow for manufacturing constraints, and provide a clear advantage to existing solutions.

The five-year program in industrial and interaction design, which leads to the professional degree, bachelor of industrial design (B.I.D.), is noted for combining theory and practice, taking a processoriented approach, and focusing on social and environmental responsibility. It is accredited by the National Association of Schools of Art and

Design and exceeds the educational minimums recommended by the Industrial Designers Society of America (IDSA). The program consists of courses in design theory and practice, as well as support courses in the humanities, the physical and natural sciences, and the behavioral and social sciences. The responsive curriculum maintains a balance between technical, aesthetic, and humanistic aspects and keeps pace with the leading edge of design technology by anticipating developments in the field.
Students in the program participate in collaborative projects with business, industry, and government agencies, challenging students with real-life design problems. Industrial and interaction design students have an active chapter of the IDSA, which plans lecture programs, organizes field trips to consultant and corporate design offices, and participates in regional and national meetings of the society.

## Program Requirements

Major Requirements: 78 credits

- DES 101 - Design Concepts
- DES 102 - Design Applications
- DES 103 - Introduction to Design Thinking
- IND 104 - Fundamentals of Industrial \& Interaction Design
- IND 271 - Principles of Industrial Design I
- IND 272 - Principles of Industrial Design II
- IND 273 - Principles of Industrial Form I
- IND 274 - Principles of Industrial Form II
- IND 276 - Industrial Design: Visualization and Representation
- IND 373 - Production Processes: Metals
- IND 374 - Production Processes: Plastics
- IND 375 - Human Factors For Designers
- IND 376 - Digital Surface Modeling
- IND 377 - Industrial Design: Typography Studio
- IND 378 - Symbology and Semiotics in Industrial Design
- IND 471 - Multidisciplinary Product Development
- IND 472 - Industrial Design: Product Systems
- IND 476 - Industrial Design: Environmental Practicum
- IND 477 - Industrial Design: Primary and Secondary Research
- IND 479 - Industrial Design Interface
- IND 571 - Industrial Design: Product Practicum
- IND 573 - Industrial Design: Thesis Research
- IND 574 - Industrial Design: Thesis
- IND 577 - Industrial Design: Philosophy and Ethics
- IND 578 - Industrial Design: Professional Practices

Art History Requirements: 12 credits

- ART 113 - History of Modern Design: 1850-Present
- DES 201 - Design, Cultural Traditions and the Environment
- DES 281 - Design Symposium (x3) 1 credit each
- Art/Design History Elective (3 credits)

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 21 credits

## Studio Electives: 24 credits

IND 204 is strongly suggested as a studio elective during the sophomore year

## Free Electives 9 credits

## Study Abroad

Pending a successful application and meeting program requirements, students may apply to spend a semester of their fourth year abroad at the SU Abroad Center in London. Please refer to the SUAbroad website for eligibility and application criteria.

Total Credits Required: 150
Degree Awarded: BID in Industrial and Interaction Design

## Jewelry and Metalsmithing, BFA

## Contact

Barbara Walter, Department of Art ComArt Building, 315-443-3700, bewalter@syr. edu

## Faculty

Lori Hawke, Barbara Walter

## Description

The jewelry and metalsmithing program teaches students to manipulate a variety of metals with tools for aesthetic ends. The flexibility of the curriculum allows students to select the directions they wish their work to take, such as jewelry making, silversmithing, or processes that move across these traditions. In fact, students are encouraged to experiment across media lines so that traditional involvement with non-precious and precious metals is mixed with the exploration of plastics, woods, gemstones, and other materials.
Students in the program make objects that range from the highly functional to the purely expressive. They study such jewelry and metalsmithing techniques as forming, joining, molding, stonecutting, stone setting, and surface decorating. Related studies in the classical and contemporary uses of materials and tools, rendering, and small sculpture provide topics for independent research and investigation.

Excellent studio facilities and attentive instruction from professional artists provide a balanced experience in fine crafts making and industrial processes. Through close contact with faculty members, students participate in frequent group and individual critiques and are assisted in identifying and pursuing program and career goals.
First-year art and design majors are invited to enroll in introductory level classes.

## Program Requirements

Major Requirements: 42 credits

- FND Studio (x4) 3 credits each
- JAM 271 - Introduction to Jewelry and Metals
- JAM 272 - Casting
- JAM 371 - Surface Techniques and Processes
- JAM 372 - Metal Forming
- JAM 373-Stones and Stonesetting
- JAM 374 - Color on Metal
- JAM 471 - History of Jewelry and Metalsmithing
- JAM 472 - Jewelry Production
- JAM 473 - Machine Tools and Technology
- JAM 475-Senior Portfolio and Exhibition

Art History Requirements: 15 credits

[^14]Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits

- Six (6) credits must be in Humanities

Studio Electives: 30 credits
Free Electives 9 credits
Total Credits: 126
Degree Awarded: BFA in Jewelry and Metalsmithing

Painting, BFA

## Contact

Kevin Larmon, Department of Art
102 Shaffer Art Building, 315-443-
4613, klarmon@syr.edu

## Faculty

Sharon Gold, Andrew Havenhand, Kevin Larmon, Jerome Witkin, Stephen Zaima

## Description

Students who pursue this degree develop their technical skills through extensive studio work in painting, drawing, and special studio seminars. Courses in art history and critical theory expose students to concepts of the past and heighten their visual and intellectual perception. Students are encouraged to experiment in new directions and to remain open to innovative ideas and approaches as they develop their own unique means of expression.

Painting students study under a diversified professional faculty whose styles and modes of painting run the gamut of contemporary expression. There is also a visiting artist program. The Shaffer Art Building offers well-lit studios, a well-supervised wood shop, and individual studios for senior majors.

## Program Requirements

## Major Requirements: 45 credits

[^15]- PTG 256 - Figure Drawing
- PTG 355 - Intermediate Drawing or
- PTG 356 - Intermediate Drawing
- PTG 281 - Introductory Painting
- PTG 282 - Introductory Painting
- PTG 381 - Intermediate Painting
- PTG 382 - Intermediate Painting
- PTG 481 - Advanced Painting
- PTG 482 - Advanced Painting
- PTG Elective (x3) 3 credits each

Art History Requirements: 15
credits credits

- Art/Design History Requirement (x2) 3 credits each
- Art/Design History Elective (x3) 3 credits each

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 21 credits

## Studio Electives 30 credits

Free Electives: 9 credits

## Study Abroad

Students can study abroad in our Florence program, as well as take classes in New York City as part of the SU MAYmester summer program.

## Total Credits Required: 126

## Degree Awarded: BFA in Painting

## Printmaking, BFA

## Contact

Dusty Herbig, Department of Art
ComArt Building, 315-443-3700, dthergig@syr. edu

## Faculty

Holly Greenberg, Dusty Herbig
Description
All printmaking courses are offered in a workshop
environment to make available a variety of traditional and contemporary processes in intaglio, lithography, serigraphy, relief, collography, and photographic processes in printmaking. Advanced students work in hand papermaking and bookmaking as well. A broad drawing curriculum is considered essential to printmaking. In addition, the student is encouraged to take advantage of other disciplines and resources in the school and the University.

The B.F.A. degree program in printmaking promotes an open, experimental attitude within the rigors of high professional and technical standards. Students are urged to explore the various technical printmaking processes and their aesthetic qualities before narrowing their interests to a specific technique. As their studies progress, students may pursue a more thorough investigation of a particular process. Students may, however, decide to continue working within a broad scope of printmaking throughout their college careers, taking advantage of the overlapping aesthetic and technical possibilities existing in the range of printmaking processes.

Regular critiques of student work provide an active exchange of ideas on aesthetic and media interests. Faculty members can help students identify and work toward their educational and career goals while they complete the requirements of the program.

## Program Requirements

## Major Requirements: 51 credits

- FND Studio (x4) 3 credits each
- PRT 251 - Printmaking: Introductory Intaglio
- PRT 253 - Printmaking: Introductory Lithography
- PRT 255 - Printmaking: Introductory Serigraphy
- PRT 257 - Printmaking: Introductory Relief
- PRT 351 - Printmaking, Intermediate Workshop
- PRT 352 - Printmaking, Intermediate Workshop
- PRT 430 - Senior Portfolio and Research Paper: Printmaking
- PRT 451 - Printmaking: Advanced Workshop
- PRT 452 - Printmaking: Advanced Workshop
- PRT 551 - Hand Papermaking Workshop
- PRT 552 - Hand Paper Print/Book Workshop
- ILL 284 - Media Arts Techniques
- Drawing Elective 3 credits


## Art History Requirements: 15 credits

[^16]- Art/Design History Elective (x3) 3 credits each

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Studio Electives: 24 credits
Academic Electives: 21 credits
Free Electives: 9 credits
Total Credits Required: 126
Degree Awarded: BFA in
Printmaking
Sculpture, BFA

## Contact

Jude Lewis, Department of Art ComArt Building, 315-443-3700, jllewis@syr.edu

## Faculty

Jude Lewis, Samuel Van Aken, Robert Wysocki

## Description

Sculpture involves three-dimensional experimentation with forms, materials, and concepts. Students in this B.F.A. degree program consider problems of composition and expression in traditional media (metals, clay, and wood) as well as contemporary modes (plastics, mixed media, and digital).

The program stresses individual growth and the development of innovative ideas and forms through a wide variety of technical processes. The large degree of freedom in the program requires individual responsibility on the part of each student. The department provides faculty assistance and guidance, optimal facilities, and lectures and workshops by visiting artists.

Courses in sculpture introduce students to the broad range of sculptural processes. They learn modeling, welding techniques, polymers and casting metals, casting resins and fiberglass layup, wood carving, lamination, and contemporary media. Advanced studios allow students to pursue a sculptural area of concentration, such as a thematic direction or a specific medium.

Faculty members maintain close contact with students to ensure the open exchange of ideas and to observe student progress. Visiting
artists and lecturers bring additional insights and experiences to workshops and guest professorships.

## Program Requirements

## Major Requirements: 42 credits

- FND Studio (x4) 3 credits each
- SCU 295 - Introductory Sculpture
- SCU 296 - Introductory Sculpture
- SCU 391 - Wood and Mixed-Media Research
- SCU 392 - Plastics Techniques Research
- SCU 395 - Intermediate Sculpture
- SCU 396 - Intermediate Sculpture
- SCU 495 - Advanced Sculpture
- SCU 496 - Advanced Sculpture
- SCU Elective (x2) 3 credits each


## Art History Requirements: 15

 credits- Art/Design History Requirement (x2) 3 credits each
- Art/Design History Elective (x3) 3 credits each

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 21 credits
Studio Electives: 33 credits
Free Electives: 9 credits
Total Credits Required: 126
Degree Awarded: BFA in Sculpture

Special Studies in Art, BFA

## Contact

VPA Student Affairs
200 Crouse College, 315-443-2517

## Description

The special studies in art program leads to the B.F.A. degree and is designed expressly for interdisciplinary study.

## Prerequisites for Admission to the Major

The program is not automatically available; it must be mutually approved by the advisors in the various areas incorporated into the program. All applicants must undergo a personal interview and a portfolio review. In addition, a written proposal for the complete program of study is required, including specific courses and credits. Students are expected to complete the foundation program, and sophomores must have a 3.0 cumulative grade point average and a portfolio of superior caliber to be accepted. The decision to enroll in the special studies program must be made before the student accumulates 60 credits.

Major Requirements:
As per approved proposal

## Total Credits Required: 126

Degree Awarded: BFA in Special Studies in Art

## Minor

## Animation Minor

## Coordinator

Annina Ruest, Department of Transmedia 102 Shaffer Arts Building, 315-443-1033, arust@ syr.edu

## Description

The VPA Minor in Animation creates a focus for students interested in animation production. The core requirements of this minor introduce animation techniques, and culminate with a collaborative production course. The elective courses allow students to investigate studies that are critically related to animation, allowing for both broader and/or specific research.

## Admission

Students interested in this minor should meet with the faculty contact. Prospective students must submit a current transcript, a letter of interest not to exceed 1500 words, and any work in the form of digital media files on CD or DVD that may be related to the minor. There are no absolute requirements in terms of the number of works or GPA. Acceptance into the minor will be made solely by the faculty contact for the minor upon review of application materials. Students need to maintain a 3.0 GPA average in the minor
curriculum; otherwise they may be expelled from the minor. Limited to 10 students.

## Minor Requirements

Required Courses: 12 credits

- CAR 101 - Introduction to 3D Animation and Visual Effects
- CAR 201 - Intermediate 3D Animation and Visual Effects
- CAR 301 - Advanced 3D Animation and Visual Effects
- FIL 321 - Filmmaking: Animation


## Elective Courses: 9 credits

Choose THREE of the following courses:

- ART 250 - Filmmaking: Cinematic Modes
- CAR 111 - Introduction to Programming for Visual and Networked Art
- CAR 530 - Special Topics in Computer Art Collaborative Animation
- CAR 530 - Special Topics in Computer Art History of Animation
- DRA 105 - Intro Acting/Non-Majors
- FIL 225 - Problems of Film Perception
- FND 112 - Special Topics in Time Arts Experimental Animation
- FND 114 - Special Topics in Foundation Drawing - Drawing through the Figure
- FND 114 - Special Topics in Foundation Drawing - Narrative Drawing
- ILL 273 - Drawing for Illustration
- ILL 274 - Sequential Illustration
- PTG 353 - Anatomy
- PTG 354 - Anatomy


## Total Credits Required: 21

## Art Photography Minor

## Coordinator

Laura Heyman, Department of Transmedia 102 Shaffer Art Building, 315-443-1033, Iheyman@syr.edu

## Description

The minor in art photography extends the opportunity to learn the foundations of traditional and digital photography, while exploring the creative potentials of the medium.

All minor students are trained to use a wide array
of camera formats while learning both darkroom and digital processes. Students with a strong personnel vision are invited to participate in seminar classes along with our majors. These courses provide an intense critique environment terminating in the production of a professionallevel portfolio. Students more interested in the historical, theoretical, and non-traditional perspectives of photography may choose from a menu of electives. Image making has a prominent role in book, installation, conceptual, and performance art - our courses reflect the multifaceted nature of contemporary photography.

## Admission

Students interested in this minor should meet with the faculty contact. Prospective students must submit a current transcript and portfolio. Acceptance into the minor will be made solely by the faculty contact for the minor upon review of application materials. You need to maintain a 3.0 GPA average in the minor curriculum; otherwise, you may be expelled from the minor. The minor is limited to 15 students.

## Required Courses: 9 credits

- APH 261 - Art Photography, Introduction
- APH 262 - Art Photography Introduction II
- APH 263 - Art Photography: Advanced Digital Imaging


## Elective Courses: 9 credits

Choose THREE of the following courses:

- TRM 310 - Literacy, Community and Media
- APH 361 - Lighting for Photography
- APH 561 - Art Photography: Contemporary Art and Photography
- APH 562 - Art Photography: Contemporary Critical \& Theoretical Texts on Art \& Photography
- APH 563 - Art Photography: Non-Traditional Modes
- APH 564 - Image/Sequence: Photo Book
- APH 565 - Art Photography: Performance Art
- APH 566 - Art Photography: Photography and Cinema
- APH 362 - Art Photography Junior Seminar *
- APH 461 - Art Photography: BFA Senior Seminar *
- APH 462 - Art Photography: BFA Exhibition and Portfolio *
* Seminar classes are for students that show significant promise and commitment. Students will be admitted into seminars by permission of faculty upon review of portfolio.


## Total Credits Required: 18

## Ceramics Minor

## Coordinator

Errol Willet, Department of Art 102 Shaffer Art Building, 315-443-4613, eswillet@syr.edu

## Description

The 110-year-old Ceramics Program in Syracuse University's School of Art and Design is ideally positioned to offer a Minor degree in Ceramics to all undergraduate students of the university. With the combination of three full-time faculty, a technician, extensive facilities and highly qualified graduate students, the Ceramics Program is more than capable to provide a Minor degree.
While candidates for this degree may come from any discipline within the University, the Ceramics Program has a history of attracting students from Architecture, Industrial Design, Geology, Engineering and Business. The Ceramics Program teaches equally to the fine art major, as well as students of craft and to the many architectural and industrial practices that involve ceramic processes. The field of ceramics has direct historical ties with design, engineering, architecture, geology, business and studies in art history. Indirectly the connections broaden to incorporate literature, poetry, philosophy and politics as they pertain to the ceremonies and content that surround ceramic objects and their relevance to cultural identity.

The prospective advantage of minors working alongside majors is very exciting considering the different expertise that students from other majors at the University will bring to their ceramic work and to the content and conversation among the studio arts major population in the Ceramics Program. This has been the experience of the Ceramics Faculty over the years as they have numerous exceptional and engaged students expressing a desire to minor in this exciting and historically rich major.
Students accepted into the Minor will be assigned a faculty advisor from the full-time faculty in the Ceramics Program.

## Admission Requirements:

\author{

- Minimum 3.0 GPA
}
- Must enter by the beginning of Junior Year.
- Limited space available.
- Rolling admission. Requires review meeting
with Faculty Coordinator of Ceramics Program.


## Minor Requirements

Required Courses: 6 credits
Choose TWO of the following courses:

- CER 221 - Introduction to Ceramics
- CER 222 - Introduction to Ceramics
- CER 223 - Intro Ceramic Wheel Throwing
- CER 224 - Intro Ceramic Wheel Throwing


## Elective Courses: 12 credits

Choose FOUR of the following courses:

- CER 321 - Intermediate Ceramic Sculpture and
- CER 322 - Intermediate Ceramic Sculpture
- CER 323 - Intermediate Wheel Throwing and
- CER 324 - Intermediate Wheel Throwing
- CER 327 - Clay \& Glaze Technology and
- CER 328 - Clay \& Glaze Technology
- CER 421 - Advanced Ceramic Sculpture and
- CER 422 - Advanced Ceramic Sculpture
- CER 423 - Advanced Wheel Throwing and
- CER 424 - Advanced Wheel Throwing
- CER 524 - Ceramic Research

Total Credits Required: 18
Computer Gaming Minor

## Coordinator

Department of Transmedia
102 Shaffer Art Building, 315-443-1033

## College/School

College of Visual and Performing Arts

## Description

The minor in computer gaming creates a focus for students interested in the practical, social, and theoretical aspects of computer/video games. The core requirements of this minor introduce the primary methods and concepts that are key to the production of computer/video games. The elective courses direct students to investigate a range of studies that are critically related to gaming, allowing for both broader and/or specific research.

## Admission

Students interested in this minor should meet with the faculty contact. Prospective students must submit a current transcript, a letter of interest not to exceed 1,500 words, and any work in the form of digital media files on CD or DVD that may be related to the minor. There are no absolute requirements in terms of number of works or GPA. Acceptance into the minor will be made solely by the faculty contact for the minor upon review of application materials. Students need to maintain a 3.0 GPA average in the minor curriculum; otherwise they may be expelled from the minor. Limited to 10 students.

## Program Requirements

Required Courses: 12 credits

- CAR 101 - Introduction to 3D Animation and Visual Effects
- CAR 201 - Intermediate 3D Animation and Visual Effects
- CAR 233-2D Computer Gaming
- CAR 340 - Computer Gaming


## Elective Courses: 9 credits

Choose THREE courses from the following areas:

## Theory

- IND 378 - Symbology and Semiotics in Industrial Design or
- CAR 530 - Special Topics in Computer Art or
- FIL 225 - Problems of Film Perception


## Interaction

- IND 276 - Industrial Design: Visualization and Representation or
- IND 375 - Human Factors For Designers


## Programming

- CPS 196 - Introduction to Computer Programming or
- CAR 132 - Procedural Composition


## Science

- PHY 101 - Major Concepts of Physics I or
- MAT 194 - Precalculus


## Writing

- ETS 153 - Interpretation of Fiction or
- CRS 339-Communication, Space and Design or
- FIL 228 - Film Scriptwriting


## Art

FND 114 - Special Topics in Foundation Drawing : Drawing Through the Figure

Total Credits Required: 21
Jewelry and Metalsmithing Minor

## Coordinator

Barbara Walter, Department of Art ComArt Building, 315-443-3700, bewalter@syr. edu

## College/School

College of Visual and Performing Arts

## Description

The curriculum gives the minors the same base of knowledge as the majors, but allows the minors to choose a path within the program that suits their interests. The student may decide to take jewelry oriented courses, metalsmithing courses, or a combination of both. The curriculum also gives the students an historic understanding of the field and an opportunity to discuss many of the issues faced by jewelers and metalsmiths now.

## Admission

3.0 GPA (based on the completion of 30 credits with a minimum of 15 credits taken at Syracuse University)
An interview with the coordinator is required. Must enter program no later than the first semester of junior year. (Open to campus as a whole)
Applications accepted at any time, but will adhere to October 15 deadline for processing and approval in the Fall semester (March 1st for Spring semester).

## Minor Requirements

## Required Courses: 6 credits

- JAM 271 - Introduction to Jewelry and Metals
- JAM 272 - Casting

[^17]- JAM 471 - History of Jewelry and Metalsmithing
- JAM 472 - Jewelry Production
- JAM 473 - Machine Tools and Technology
- JAM 474 - Jewelry and Metalsmithing Contemporary Issues

Total Credits Required: 18

## Painting Minor

## Coordinator

Kevin Larmon, Department of Art
102 Shaffer Art, 315-443-4613, klarmon@syr.edu

## College/School

College of Visual and Performing Arts

## Description

The Painting Minor aims to extend students' painting skills, develop their art and critical practices, broaden their understanding and abilities to make and discuss art. It also aims to help students understand that a practicing visual artist needs to think globally and be knowledgeable in many cultural and social discourses in order to be conversant in contemporary issues and critical practices.
Whether the minor fulfills students' desires to study painting or helps bring new skills to their major, the benefit for those who major or minor in painting will be advanced by the conflation of diverse skill sets, opening up creative, intellectual and conceptual content to each others work and class dynamic.
To complete the minor in Painting, students must complete a total of 18 credits, over a 3 to 4 year period. Students can also include 300 level or higher SUAbroad studio, critical studies, or art history classes towards their minor. In addition, those taking the Department of Art Lecture series, which is currently offered every semester for 1 credit, can apply up to 3 of those credits as well.

## Admission

- 3.0 GPA (based on the completion of 30 credits with a minimum of 15 credits taken at Syracuse University)
- An interview with the coordinator is required.
- Must enter program no later than the first semester of Sophomore year.
- Applications accepted at any time, but will adhere to October 15 deadline for processing and approval in the Fall semester (March 1st for Spring semester).


## Minor Requirements

Required Courses: 6 credits

- PTG 281 - Introductory Painting
- PTG 282 - Introductory Painting


## Lecture and Studio Courses: 6 credits <br> Choose TWO from the following:

- PTG 381 - Intermediate Painting
- PTG 382 - Intermediate Painting
- PTG 355 - Intermediate Drawing
- PTG 487 - Landscape Painting

Elective Advanced Studio, Theory \&
Praxis Seminar Courses: 6 credits
Choose TWO from the following:

- PTG 481 - Advanced Painting **
- PTG 482 - Advanced Painting **
- STA 500 - Art in New York City
- ART 361 - Studio Symposium
- Art 200 - Visiting Artist Lectures
- ART 531 - Professional Practices in Visual Arts
- ART 553 - Decoding Images of Representation
- ART 561 - Studio Symposium


## Note:

** Students that demonstrate significant promise and commitment, by maintaining a 3.0 or higher GPA in lower division PTG or ART classes, will be allowed into seminar and advanced studio classes to complete the minor, as well as apply to be a major in the Painting Program.

Total Credits Required: 18
Physical Computing Minor

## Coordinator:

Annina Ruest, Department of Transmedia
102 Shaffer Art Building, 315-443-1033, arust@ syr.edu

## College/School

College of Visual and Performing Arts

## Description

The Department of Transmedia currently offers a Physical Computing minor to those students enrolled in other courses of study.

## Admission

Students interested in this minor should meet with the faculty contact. Prospective students must submit a current transcript, a letter of interest not to exceed 1500 words, and any work in the form of digital media files that may be related to the minor. There are no absolute requirements in terms of number of works or GPA - acceptance into the minor will be made solely by the faculty contact for the minor upon review of application materials. Students need to maintain a 3.0 GPA average in the minor curriculum; otherwise they may be unenrolled from the minor.

## Minor Requirements

Students must take 12 credits at the 300 level or above.

## Core requirements: 6 credits

- CAR 111 - Introduction to Programming for Visual and Networked Art
- CAR 211 - Introduction to Electronics and electronic Object Making for Art


## Advanced Core Requirements: 6

 creditsChoose TWO from the following:

- CAR 520 - Topics in Electronic Environments
- CSE 471 - Introduction to Embedded System Design
- CIS 543 - Control of Robots
- CIS 425 - Introduction to Computer Graphics
- CAR 230 - Topics in Computer Gaming I
- CAR 330 - Topics in Computer Gaming II


## Object Fabrication/Object Design

Electives: 3 credits
Choose ONE from the following:

- SCU 392 - Plastics Techniques Research
- SCU 391 - Wood and Mixed-Media Research
- SCU 200 - Selected Topics
- SCU 300 - Selected Topics
- DES 300 - Fabrication Skills and Methods or
- DES 500 - Fabrication Skills and Methods
- DES 300 - Digital Fabrication or
- DES 500 - Digital Fabrication
- SCU 207 - Sculpture Survey
- IND 479 - Industrial Design Interface


## Technology Electives: 3 credits

- ARC 572 - Advanced Computer Applications to Architecture
- IST 359 - Introduction to Database Management Systems
- CIS 400 - Selected Topics : Mobile App Development
- IST 488 - Social Web Technologies
- IST 263 - Design and Management of Internet Services
- IST 256 - Application Programming for Information Systems
- IST 553 - Information Architecture for Internet Services
- ECS 102 - Introduction to Computing
- CIS 467 - Introduction to Artificial Intelligence
- CIS 468 - Natural Language Processing
- CIS 400 - Selected Topics : Applied Data Mining
- CIS 400 - Selected Topics :Human-Computer Interaction


## Total Credits: 18

## Sculpture Minor

## Coordinator

Jude Lewis, Department of Art
ComArt Building, 315-443-3700, jllewis@syr.edu

## College/School

College of Visual and Performing Arts

## Description

The minor will consist of 18 credits and function as a theoretical and practical based studio minor, intended to complement the studio-based majors in the College of Visual and Performing Arts and the School of Architecture. Additionally, the Sculpture minor will provide non-studio majors a concentration in the theory and concepts of studio object making in a studio based research setting. The minor is open to all Syracuse University undergraduates.

## Admission

3.0 GPA (based on the completion of 30 credits). Must be enrolled in program no later than the first
semester of Junior year.
Applications accepted at any time, but will adhere to October 15 deadline for processing and approval in the Fall semester.

## Minor Requirements

Required Courses: 9 credits

- SCU 295 - Introductory Sculpture or
- SCU 296 - Introductory Sculpture
- SCU 395 - Intermediate Sculpture
- PHI 395 - Philosophy of Art

Elective Courses: 9 credits
Choose THREE from the following:

- SCU 300 - Selected Topics Metal Dynamics

SCU 300 - Selected Topics Foundry/Metal Casting
SCU 300 - Selected Topics

- SCU 391 - Wood and Mixed-Media Research
- SCU 392 - Plastics Techniques Research
- SCU 495 - Advanced Sculpture

Prerequisites may be waived for minors.

## Total Credits Required: 18

## Visual Culture Minor

## Coordinator

Charles Morris III, Department of Communication and Rhetorical Studies
100 Sims Hall, 315-443-2308, cemorris@syr.edu

## College/School

College of Visual and Performing Arts

## Description

The minor in Visual Culture exploits one of the unique strengths of Syracuse University: a world class arts school in the midst of a research institution. The minor is an interdisciplinary program sponsored by the following units: The School of Art and Design and Communication and Rhetorical Studies. The minor functions as an academically-based minor that is intended to complement the studio-based majors in the College of Visual and Performing Arts and provide non-studio based majors a concentration in visual culture and criticism that is theoretically and historically informed. The minor is open to all Syracuse University undergraduates.
The Visual Culture minor provides students with the critical skills necessary to address the evolving
intersection of art, design, and communication in a variety of contexts including the art world, consumer culture, politics, and popular culture. Drawing on the diversity of disciplinary approaches to visual culture, the minor fosters critical engagement with diverse modes of visual expression and communication, from advertising design and image activism to material culture and public sculpture.
The Visual Culture minor equips students with an interdisciplinary conceptual framework that will illuminate (1) the diverse sensory modes (i.e. verbal, aural, tactile, etc.) that inform and interact with visual expression; (2) the various institutional frameworks that shape the production, circulation, and reception of visual culture (from the nineteenth century forward); and (3) the historical and cultural contexts that normalize particular viewing practices and social formations.

By the completion of the minor, students will be adept in interdisciplinary viewing practices, familiar with diverse critical approaches to visual meaning, and an effective in communicating complex visual ideas.
The Visual Culture minor should be of interest to students who seek a program that focuses on visual culture as the nexus of creative practice, advocacy, and criticism.

## Admission

- Visual Culture Minor Application.
- Transcript of your Syracuse University courses. Applications accepted at any time, but will adhere to October 15 deadline for processing and approval in the Fall semester and March 1st for Spring semester.


## Minor Requirements

## Required Course: 3 credits

- ART 316 - Introduction to Visual Culture or
- CRS 316 - Introduction to Visual Culture or
- TRM 316 - Introduction to Visual Culture


## Electives

Required Electives: 9 credits
Modern Art Media* 3 credits
Design History and Material Culture* 3 credits
Art History, Theory and Criticism* 3 credits
VPA ELECTIVES** 6 credits

* Students are required to take one course from each of the three elective tracks. The three selected courses must have different prefixes. For example, students can NOT take ART 250, ART


## 201, and ART 310.

**Students may select any CVPA courses (above the 100-level) or may petition to have courses taken outside VPA (above the 100 -level) count toward the minor.

## Modern Art Media Track

Choose ONE from the following:

- APH 561 - Art Photography: Contemporary Art and Photography
- APH 562 - Art Photography: Contemporary Critical \& Theoretical Texts on Art \& Photography
- ART 250 - Filmmaking: Cinematic Modes
- ART 253 - Survey of Film History
- CRS 483 - Rhetoric of Film
- FIL 226 - Survey of Film Theory
- FIL 360 - Topics in Film Culture
- VID 510 - Video Art History

Design History and Material Culture Track

Choose ONE from the following:

- ART 207 - History of Ceramics
- ART 314 - History of the Bauhaus: Studies in Material Culture
- ART 411 - History of Japanese Design: Studies in Material Culture
- ART 431 - Art Nouveau Design and Architecture: Studies in Material Culture

DES 201 - Design, Cultural Traditions and the Environment

- DRD 321 - Theatrical Costume Design I
- FAS 335 - History of Fashion Design I: Origins and Revivals
- FAS 336 - History of Fashion Design II: Contemporary Trends
- JAM 471 - History of Jewelry and Metalsmithing
- MUS 503 - Introduction to Museum Studies


## Art History, Theory, and Criticism Track

Choose ONE from the following:

- ART 553 - Decoding Images of Representation
- APH 561 - Art Photography: Contemporary Art and Photography
- APH 562 - Art Photography: Contemporary Critical \& Theoretical Texts on Art \& Photography *

ART 310 - Picasso and the Modern Movement: Critical Approaches to Modern Art *

- ART 361 - Studio Symposium
- ART 410 - Topics in the History of Art
- ILL 265 - History of Illustration
- MUS 405 - Print Curatorship
*Prerequisites waived for declared Visual Culture minors.


## Total Credits Required: 18

## Other Programs

## Department of Foundation

## Fall Semester

- ART 101 - First Year Colloquium
- WRT 105 - Studio 1: Practices of Academic Writing
- Academic electives/studio elective 3-6


## Choose two of the following:

- FND 111 - Time Arts
- FND 113 - Foundation Drawing
- FND 115 - Two-Dimensional Creative Processes
- FND 117 - Dimensional Arts


## Choose one of the following:

- ART 111 - History of Modern Art: 1850-Present
- ART 113 - History of Modern Design: 1850-Present

Total Credits: 16
Spring Semester

- Academic elective 3 credit(s)
- Academic/studio elective(s) 3-6 credit(s)

Choose the remaining two not taken in the fall semester:

- FND 111 - Time Arts
- FND 113 - Foundation Drawing
- FND 115 -Two-Dimensional Creative Processes
- FND 117 - Dimensional Arts


## Choose remaining one not taken

 in fall semester:- ART 111 - History of Modern Art: 1850-Present
- ART 113 - History of Modern Design: 1850-Present

Total Credits: 15

## University Requirement

Although not a foundation requirement, it is a University requirement, and should be taken within the first two years of study. It is offered only in the spring semester.

- WRT 205 - Studio 2: Critical Research and Writing


## Drama

Ralph Zito, Chair
820 East Genesee Street, 315-443-2669
http://vpa.syr.edu/drama
Timothy J. Bond, Producing Artistic Director, Department of Drama and Syracuse Stage
As an undergraduate conservatory-style theater training program that is both directly partnered with a professional theater company and part of a major American university, SU Drama is uniquely positioned to train the next generation of professional theater artists. Students learn from faculty members who themselves are practicing professionals in every aspect of theater. The Department provides students with the opportunity to draw upon the unparalleled theater and art resources of London, England, or Florence, Italy, through study abroad. It also offers a unique drama experience through the Tepper Semester, a rigorous artistic training program in the culturally rich setting of New York City. Many of the alumni who have gone on to become highly respected writers, actors, directors, producers and designers return to campus occasionally to lecture, advise, and participate in informal discussions. Visiting artists working at Syracuse Stage or other professional venues in the area often conduct workshops or discussions with Drama students.
The Department of Drama offers four professional programs, leading to the B.F.A. degree: in theater design and technology, acting, musical theater, and stage management. It also offers a B.S. degree in drama. The Department of Drama is committed to ensuring that students receive a strong foundation in the theater in all of its forms. Undergraduates put classroom theory into practice and carry out the University's academic mission of Scholarship in Action through productions and community engagement.

The unique affiliation between the Drama Department and Syracuse Stage, an outstanding Equity theater company, provides opportunities for our students to gain professional experiences in all areas of study while working toward their undergraduate degrees. These two organizations share space in the same theater complex.

The faculty covers material in appropriate courses that includes plays by playwrights from all backgrounds. The practice of non-traditional casting affords students the opportunity to
perform roles not traditionally assigned to them. Design/technical theater studio courses by nature invite and promote exploration of diversity in ideas, themes, and approach to visual presentation of plays; texts for assigned projects are chosen on the basis of ensuring a diverse experience. Academic topics courses (451/452) occasionally embrace themes directly relating to diversity.

## B.F.A. Degree

The B.F.A. degree is the dominant degree in the drama department. Along with traditional drama requirements, students have the option of selecting support courses from the University's other professional schools, including art and music. Each program requires $94-100$ credits in the selected discipline, drama and related support courses, which are selected by the student and advisor to achieve specific professional goals. The remaining 30 credits are devoted to academic courses outside of the department.

During the first year of study, students in the Acting and Musical Theater Programs concentrate on building fundamental skills rather than on performance. Students in both programs share classes in acting, movement, and voice. In addition to these Core courses, Musical Theater students begin their training in dance and singing. Freshman Design and Technology Students begin their studies in art foundation, theater design and stagecraft, and in their second year begin studies specific to their area of interest (scenic, costume or lighting). Stage Management students begin with a foundation in theater, stage management, and stagecraft from the first year.

Continuation in the B.F.A. program in Acting or Musical Theater is based on faculty evaluation of the student's classwork and personal commitment at the end of the second year of study. However, this is not the only evaluation. All students in the department are evaluated periodically to see whether their commitment and development warrant continuation in the program they have selected.

## B.S. Degree in Drama

The Drama, BS is structured much like the traditional arts and sciences degree and enables students to incorporate the intensive training of the drama program with a broad education in the liberal arts. Students interested in the B.S. degree may choose a track (concentration) in Acting, Directing, Playwriting or in Theater Technology, providing they have been admitted to and have completed a portion of the BFA program. However, Students may be directly admitted into the Theater Management B.S. track.

The B.S. degree requires 120 credits, including
a minimum of 50 credits in the liberal arts, and a cumulative grade point average of 2.0 (C). In addition to the liberal arts distribution of requirements, students must select an 18 -credit minor or academic specialization in an academic (non-studio) area of study. They may take additional credits if they wish to satisfy their own interests.

## Minor in Drama

he Department of Drama currently offers a minor to those students enrolled in other courses of study. Students must petition the drama faculty, have a 2.5 grade point average, and have at least a sophomore standing. Fifteen students are accepted as minors each year on a "first-come, first -served" basis. Minors must fulfill 18 credits of class, including 3 credits of introduction to the theater (DRA 115) and 3 credits of theater history (DRA 352, DRA 355, or DRA 356). At least 9 of the remaining 12 credits must be in upper- level classes. Students may select courses from among classes in history, dramatic literature, theater management, theater design and technology, acting for non-majors, and others.

## Syracuse Stage

Syracuse Stage is a professional (LORT Equity) theater company. Together with the Department of Drama, it forms part of an unusual Universityprofessional theater affiliation. The close relationship between a major professional theater serving the city and a vigorous University undergraduate program for training young professionals is fostered by their common home in one complex. Drama students earn credits by assisting professional directors, designers, and technicians and by appearing in productions at Syracuse Stage; in turn, the staff of the professional theater is involved in all the productions of the drama department, supervising and assisting student designers and technicians with their work. Some student actors are cast in professional productions, and all students profit from the experience, advice, and example of professional actors, designers, directors, and resident staff working in the same building. A number of specialized drama department classes are taught by members of the Syracuse Stage staff who are part-time adjuncts to the faculty.

## Study Abroad

The College of Visual and Performing Arts, through Syracuse University Abroad, provides students in the Department of Drama with the opportunity to draw upon the unparalleled theater resources of London, England, or design resources in Florence, Italy, through study abroad. Coursework is designed to take advantage of the quantity and
quality of London theater. A unique weekly acting workshop at the prestigious Globe Theatre, offered during the Fall semester, provides training in special skills such as stage movement and voice. Students may also take courses in the arts and sciences, communications, environmental arts, or management. A direct placement program with the London College of Fashion offers students majoring in costume design an opportunity to study costume design and technology during their junior year. Design students may choose to study in Florence, Italy, where rich cultural resources in art, theater, and opera provide an unforgettable educational experience. For further information, contact the Office of Student Services, 200 Crouse College, or SU Abroad, 106 Walnut Place (suabroad.syr.edu).

## The Tepper Semester: a New York City Drama Experience

The Tepper Semester is a unique program from Syracuse University's Department of Drama that offers undergraduate students in advanced levels of acting, musical theater, design, and stage management the opportunity to immerse themselves in a rigorous artistic training program in the culturally rich setting of New York City. Students in the Tepper Semester work closely with an accomplished faculty of professional, working artists who nurture the students' creative, intellectual, and personal growth. The faculty also helps students gain an understanding of the business skills essential for a rewarding and successful career in the industry. Residency in New York City is an integral part of the Tepper Semester. Artistic training is fueled by the cultural and educational resources of the city. In addition to being exposed to a broad range of theater, they can experience museums, libraries, and various entertainment venues.

## Syracuse University Drama Organization

The Syracuse University Drama Organization (SUDO) is the national chartered alumni club for SU drama alumni and friends in the entertainment industry. Based in New York City, SUDO's primary goals are to be a source of networking for drama alumni and to provide new and future alumni with mentoring assistance. To meet its goals, SUDO hosts many social, cultural, and fund-raising functions such as an annual reunion party, an Academy Awards party, a biannual cabaret, and a new play reading series. SUDO also publishes a regular newsletter available to members.

## Courses for Non-Drama Students

Non-drama students are welcome in DRA 105, DRA 315, DRA 352, DRA 355, DRA 356, DRA 305, DRA 405, DRA 491 and DRD 555 Evolution of Stage Design as well as in ART 250 and ART 253 (offered by the School of Art and Design).

## The Department of Drama

The Department of Drama has a unique affiliation with Syracuse Stage, an Equity theater company, and has specialized facilities, including three theater spaces and a cabaret space, enabling students to participate in every dramatic activity, from stage management, stagecraft and design to acting and directing. Students learn from faculty members who themselves are practicing professionals in every aspect of theater. The department provides students with the opportunity to draw upon the unparalleled theater and art resources of London, England, or Florence, Italy, through study abroad. It also offers a unique drama experience through the Tepper Experience, a rigorous artistic training program in the culturally rich setting of New York City. Many of the alumni who have gone on to become highly respected writers, actors, directors, producers and designers return to campus occasionally to lecture, advise, and participate in informal discussions. Visiting artists working at Syracuse Stage or other professional venues in the area often conduct workshops or discussions with Drama students.

## Major

## Acting, BFA

## Contact

Celia Madeoy, Department of Drama, 820 East Genesee Street, 315-443-2669, cmadeoy@syr. edu

## Faculty

Robert Bundy, Gerardine Clark, Stephen Cross, Timothy Davis-Reed, Elizabeth Ingram, Malcolm Ingram, Felix Ivanov, Andrea Leigh-Smith, Celia Madeoy, Katherine McGerr, Anthony Salatino, David Wanstreet

The BFA program in acting takes full advantage of the resources provided by Drama Department faculty, the University, and the Department's relationship with Syracuse Stage in order to provide emerging professional theater artists
with rigorous training in performance technique, text analysis, voice, speech and actor movement. Students are immediately immersed in a program of pre-professional study in their first year, devoting as many as 18 hours of class time per week to various theater arts. Students who are interested in directing and playwriting may elect to take additional courses in these areas under drama support requirements. All students are required to take coursework in writing.

Although first-year students are not permitted to perform on stage for the public, they work on productions behind the scenes in a wide variety of jobs, ranging from running crews to assistant stage managing. From the second year on, students may audition for roles in: faculty-directed productions and scenes and plays directed by students; films produced by undergraduate and graduate film students; and productions outside the department, including Syracuse Stage productions in appropriate roles or as understudies where union rules permit the use of non-Equity actors. Equity points may be earned through work with Syracuse Stage. As many as 20 to 30 productions may be produced in the theater complex in one year.
Students are encouraged to become proficient in more than one area of theater and may take courses in theater management, design, and stage crafts, some of which are taught by Syracuse Stage professionals.

## Program Requirements

Drama Requirements: 36
credits credits

- DRA 115 - Intro to Theater
- DRA 116 - Intro to the Theatre
- DRA 121 - The Actor's Speech Practicum
- DRA 221 - Voice/Verse Practicum I
- DRA 222 - Voice/Verse Practicum II
- DRA 321 - Advanced Voice Practicum I
- DRA 322 - Advanced Voice Verse Practicum II
- DRA 355 - Development of Theater and Drama I
- DRA 356 - Development of Theater and Drama II
- DRD 115 - Introduction to Theater Production I
- DRD 116 - Introduction to Theater Production II
- Dramatic Literature (x2) 3 credits each

Movement Requirements: 10 credits

- DRA 273 - Movement for Actors I
- DRA 274 - Movement for Actors II
- DRA 373 - Clown Technique
- DRA 374 - Solo Creation in Physical Poetry

Acting Requirements: 30 credits

- DRA 125 - Intro to Acting-Majors
- DRA 126 - Introduction to Acting
- DRA 220 - Introduction to Scene Study
- DRA 223 - Scene Study with Directors
- DRA 320 - Adv Acting: Modern Drama
- DRA 420 - Advanced Scene Study: Poetic Drama
- Upper Level Acting (x2) 3 credits each


## Theatre Laboratory: 0 credits

- DRA 090 - Theatre Lab
- Seven Required semesters of Theater Lab: total of zero credits


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits

## Drama Electives: 18 credits

NOTE: Students may only receive credit for a combined total of 12 credits from Independent Study or Experience Credit courses

Total Credits Required: 124
Degree Awarded: BFA in Acting
Drama, BS

## Contact

James Clark, Chair, Department of Drama 820 East Genesee Street, 315-443-2669, jaclark@syr.edu

## Faculty

## James Clark

The Department of Drama's B.S. degree program provides a balance of drama department classes, liberal arts, and other academic courses. It combines the intensive training of the Drama Department with a broad education in the liberal
arts. Students enrolled in the B.S. degree may choose a track (concentration) in Directing, Playwriting, Theater Technology or Acting, provided that they have been admitted to, and have completed a portion of, a Drama BFA program. However, students may be directly admitted into the Theater Management B.S. track.

The new Theater Management track will prepare you for a variety of careers including producing, marketing and public relations, casting, development, and general management. It will also provide you with the chance to develop widely transferable management skills. Working in direct partnership with professionals at Syracuse Stage, you will gain firsthand knowledge of a professional theater company's operations.
The Acting and Theater Technology tracks in the B.S. program are more broadly focused than the B.F.A. programs. This allows you to tailor your course of studies to your individual interests, and facilitates the pursuit of a minor in an area of your choice, while still enabling you to take advantage of the Department's many resources including opportunities to study abroad, and our partnership with Syracuse Stage.

## Admission

The Theater Management track is the only B.S. track that is currently open to direct application (which includes an interview). All other B.S. tracks are available only to those students who have been admitted to, and completed a portion of, one of our B.F.A. programs.

## Program Requirements

The B.S. degree requires 120 credits, including a minimum of 50 credits in the liberal arts, and a cumulative grade point average of 2.0 (C). In addition to the liberal arts distribution of requirements, students must select an 18 -credit minor or academic specialization in an academic (non-studio) area of study. They may take additional credits if they wish to satisfy their own interests.

## Drama Requirements: 22 credits

- DRA 115 - Intro to Theater
- DRA 116 - Intro to the Theatre
- DRD 115 - Introduction to Theater Production I
- DRD 116 - Introduction to Theater Production II
- DRA 355 - Development of Theater and Drama I
- DRA 356 - Development of Theater and Drama II
- Drama Literature (x2) 3 credits each

Drama Emphasis: 38 credits

- DRA 105 - Intro Acting/Non-Majors
- DRD 301 - Fundamentals of Theater Design
- DRM 194 - Introduction to Theatre

Management

- DRM 251 - Introduction to Stage Management
- DRM 381 - Theatre Management Practicum
- DRM 381 - Theatre Management Practicum
- DRM 394 - Theatre Management I
- DRM 395 - Theatre Management II
- Theater Mgmt. Elective (x2) 3 credits each
- Drama Internship: total of 8 credits

Theatre Laboratory: 0 credits

- DRA 090 - Theatre Lab
- Seven Required Semesters of Theater Lab: total of zero credits


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Minor/Academic Specialization: 18 credits

Drama Electives: 10 credits

## Academic Electives 26 credits

Humanities (6 credits)
Social Sciences (6 credits)
Sciences (6 credits)
Free Academic Electives (8 credits)

## Note:

It is recommended that the student finds an official minor from a school or college within the University that complements his or her course of study or, in consultation with his or her advisor, selects an academic specialization that is of interest and will enhance the student's education.

Total Credits Required: 120
Degree Awarded: BS in Drama

## Musical Theater, BFA

## Contact

Andrea Leigh-Smith, Department of Drama 820 East Genesee Street, 315-443-2669, alsmit11@syr.edu

## UNDERGRADUATE COURSE CATALOG

## Faculty

Brian Cimmett, Rodney Hudson, Rebecca Karpoff, Marie Kemp, David Lowenstein

## Description

The bachelor of fine arts (B.F.A.) degree program in musical theater is one of the few specialized musical theater programs in the country. The purpose of the musical theater program is to train students in a systematic way that prepares them to compete realistically in the complex professional world of musical theater. Achieving this goal requires a carefully structured balance of studio and academic work. Musical theater studio work requires skills not only in dramatic performance, but in music and dance as well. The B.F.A. program in musical theater utilizes the resources of both the Department of Drama and the Setnor School of Music. Students develop their skills in a structured, intensive format that features careful and expert guidance.
Performance is a major focus of the 128 -credit program. Students gain skills and experience in the various modes of musical theater: the revue, traditional musical comedies, operettas, and new and experimental forms. Coursework includes a balance of acting, voice, dance, theater history, music theory, and liberal education studies.

The first year is the foundation for all future training. It focuses on techniques of acting, ballet, voice-both singing and speaking-sight-singing, music theory, dramatic theory, and technical theater crafts. Writing is also a requirement for all musical theater majors. The first year is a nonperformance year, but students are assigned to work on one production behind the scenes. They may elect to work on additional productions in a wide variety of jobs.
After the first year, students may audition for all productions-musicals, dramas, films-i.e., all productions connected with the Department of Drama and Syracuse Stage. They also begin specialized training in musical theater performance, scene study, audition techniques, musical theater history, musical theater dance, and choreography. Supplementing these studies are courses in theater history, additional weekly lessons in voice and piano, vocal ensemble experience, and academic electives.

## Program Requirements

## Drama Requirements: 37 credits

- DRA 115 - Intro to Theater
- DRA 116 - Intro to the Theatre
- DRA 125 - Intro to Acting-Majors
- DRA 126 - Introduction to Acting
- DRA 220 - Introduction to Scene Study
- DRA 221 - Voice/Verse Practicum I
- DRA 222 - Voice/Verse Practicum II
- DRA 352 - Survey of Theatre History
- DRD 115 - Introduction to Theater Production I
- DRD 116 - Introduction to Theater Production II
- Upper Level Acting Course (3 credits)


## Musical Theater Requirements: 20 credits

- DRA 260 - Musical Theater Practicum
- DRA 261 - Intro Mus Thtre Perform I (x2) 1 credit each
- DRA 262 - Intro Musicl Thtre Perf II
- DRA 362 - Musical Theater Scene Study
- DRA 450 - Advanced Musical Theater Repertoire
- DRA 453 - History of Musical Theater
- DRA 462 - Auditioning:Musical Thtr

Dance: 18 credits

- Ballet (x4) (2 credits each)
- Dance Electives (x5) (2 credits each)
(eight credits MUST be upper level
300+)


## Applied Music: 14 credits

- MTC 125 - Introductory Music Theory
- MTC 225 - Sight-singing for Non Music Majors I
- MTC 226 - Sight-singing for Non Music Majors II
- PNO 120 - Piano Instruction
- VOC 110 - Voice/Non Music Major (x2) 1 credit each
- VOC 210 - Voice/Non Music Majors (x2) 1 credit each
- VOC 310 - Voice/Non Music Major (x2) 1 credit each
- VOC 410 - Voice/Non Music Majors


## Theatre Laboratory: 0 credits

- DRA 090 - Theatre Lab
- Seven Required Semesters of Theater Lab (total of zero credits)


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Drama Electives: 9 credits

## Academic Electives 24 credits

## Note:

Students may only have a combined total of 12 credits from Independent Study or Experience Credit

Total Credits Required: 128
Degree Awarded: BFA in Musical Theater

## Stage Management, BFA

## Contact

Donald Buschmann, Department of Drama
820 East Genesee Street, 315-443-2669, dgbuschm@syr.edu

## Faculty

Donald Buschmann

## Description

The Bachelor of Fine Arts in Stage Management prepares the student for a career as a professional stage manager. Program requirements are a combination of classes and experiential learning. The department works hand in hand with Syracuse Stage to provide a learning environment that emulates the professional world of the stage manager. First-year stage management students participate behind the scenes as production assistants. From the second year on, the students participate as assistant stage managers and production stage managers for main stage and Black Box Theatre productions. Advanced students may qualify for internships with Syracuse Stage productions and stage management departments that allow them to work as production assistants on professional productions.

## Program Requirements

## Drama Requirements: 42 credits

- DRA 105 - Intro Acting/Non-Majors
- DRA 115 - Intro to Theater
- DRA 116 - Intro to the Theatre
- DRA 315 - Introduction to Play Analysis
- DRA 331 - Introduction to Directing
- DRA 355 - Development of Theater and Drama I
- DRA 356 - Development of Theater and Drama II
- DRD 112 - Drafting for the Theater
- DRD 141 - Introduction to Design for the Theatre
- DRD 140 - Introduction to Theater Crafts I
- DRD 240 - Introduction to Theater Crafts II
- DRD 331 - Stage Lighting I
- DRM 261 - Stage Management Core Skills Lab
- Dramatic Literature 3 credits


## Stage Management Requirements:

## 44 credits

- DRD 337 - Practicum in Stage Lighting
- DRD 338 - Practicum in Theater Sound
- DRD 599 - Internship in Theatrical Design, Technology, or Management (x2) 3 credits each
- DRM 251 - Introduction to Stage Management
- DRM 340 - Stage Management Rehearsal Techniques
- DRM 395 - Theatre Management II
- DRM 450 - Stage Management: Performance Techniques
- DRM 460 - Stage Management for Production (x2) 4 credits each
- DRM 460 - Stage Management for Production 2 credits
- DRM 465 - Stage Management: Communication and Collaboration
- DRM 467 - Stage Management: Touring Techniques
- DRM 492 - Production Management
- Technical Practicum (x2) 2 credits each


## Theatre Laboratory: 0 credits

- DRA 090 - Theatre Lab
- Seven Required semesters of Theater Lab: total of zero credits

Drama Electives: 8 credits
Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits

Note:
Students may only have a combined total of 12 credits from Independent Study or Experience Credit

Total Credits Required: 124
Degree Awarded: BFA in Stage Management

## Theater Design and Technology, BFA

## Contact

Maria Marrero, Department of Drama
820 East Genesee Street, 315-443-2669, memarrer@syr.edu

## Faculty

Felix Cochren, Alexander Koziara, Maria Marrero

## Description

The Bachelor of Fine Arts in Theater Design and Technology is conducted within a stimulating environment that combines both classroom and hands-on learning experiences. The 130 -credit curriculum stresses building a firm foundation in the arts and the humanities as well as in the applied aspects and crafts of the theater. In the first year, in addition to their theater courses, theater design and technology majors participate in the foundation program in the School of Art and Design to enhance their drawing skills. They also are an integral part of Drama Department productions as members of backstage crews and as assistants to designers. This interaction between theory and practice is an essential part of developing an educated, creative theater person.
Advanced students design many Department of Drama main-stage productions and work with the professional staff and company of Syracuse Stage. Seniors in the program are eligible for internships with Syracuse Stage.

Students interested in design may specialize in one or more areas: set design, costume design, and lighting design. Courses in studio art, art and architectural history, and costume history contribute to developing conceptual design skills. The theater design and technology program also offers training in the use of computers as design tools. Facilities include two design studios, a LightBox and a CAD lab in addition to the technical shops shared with Syracuse Stage.
B.F.A. students interested in the technical aspects of theater may specialize in scene construction
and painting, lighting, properties, or costumes, in consultation with a faculty advisor.

The B.F.A. program is appropriate for students interested in a career in the fields of entertainment design or technology.
Students wishing to explore a curriculum that combines theater design and technology with a broader liberal arts content may apply for the120credit B.S. degree in drama, with a technical theater emphasis, provided they have been admitted to and have completed a portion of the B.F.A.

## Prerequisites for Admission

An in-person or telephone interview with a faculty member is required for admission. A portfolio submission is required.

## Program Requirements

Drama Requirements: 24 credits

- DRA 105 - Intro Acting/Non-Majors
- DRA 115 - Intro to Theater
- DRA 116 - Intro to the Theatre
- DRA 315 - Introduction to Play Analysis
- DRA 331 - Introduction to Directing
- DRA 355 - Development of Theater and Drama I
- DRA 356 - Development of Theater and Drama II
- Drama Literature 3 credits


## Design/Tech Requirements 55 credits

- DRD 140 - Introduction to Theater Crafts I
- DRD 141 - Introduction to Design for the Theatre
- DRD 142 - Introduction to Design for the Theatre
- DRD 240 - Introduction to Theater Crafts II
- DRD 111 - Media, Methods, and Materials in Theatrical Design
- DRD 112 - Drafting for the Theater
- DRD 311 - Scene Design I
- DRD 321 - Theatrical Costume Design I
- DRD 331 - Stage Lighting I
- DRD - Design Level II 3 credits
- DRD - Design Level II 3 credits
- DRD - Design Level III 3 credits
- Theater Practicum (x3) 2 credits each
- Tech Support 3 credits
- Experience Credit (x5) 2 credits each


## Theatre Laboratory: 0 credits

- DRA 090 - Theatre Lab
- Seven Required semesters of Theater Lab: total of zero credits


## Drama Electives: 12 credits

## Studio Requirement: 3 credits

- Drawing 3 credits


## Studio Electives 6 credits

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 18 credit
Art History Electives: 6 credits

## Note:

Students may only have a combined total of 12 credits from Independent Study or Experience Credit

Total Credits Required: 130
Degree Awarded: BFA in Theater
Design and Technology

## Minor

## Drama Minor

## Coordinator

Department of Drama
820 East Genesee Street, 315-443-2669

## College/School

College of Visual and Performing Arts

## Description

The Department of Drama currently offers a minor to those students enrolled in other courses of study.

## Admission

Students must petition the drama faculty, have a 2.5 grade point average, and have at least a Sophomore standing. Fifteen students are accepted as minors each year on a "first-come, first -served" basis. Minors must fulfill 18 credits of class, including 3 credits of introduction to the theater (DRA 115) and 3 credits of theater history (DRA 352, DRA 355, or DRA 356). Students may select the remaining 12 credits in and others.
** SPACE IS VERY LIMITED IN THE THEATER MINOR

## Minor Requirements

Required Course: 3 credits

- DRA 105 - Intro Acting/Non-Majors

Required Theater History: 3 credits Choose ONE from the following:

- DRA 352 - Survey of Theatre History
- DRA 355 - Development of Theater and Drama I
- DRA 356 - Development of Theater and Drama II


## Drama Electives: 12 credits

Students may select the remaining 12 credits in upper-division courses (300-level or above) from among classes in history, dramatic literature, theater management, design/technical theater, and acting for non-majors.

Total Credits Required: 18

## Other Programs

Department of Drama
Acting and Scene Study Courses

- DRA 105 - Intro Acting/Non-Majors
- DRA 125 - Intro to Acting-Majors
- DRA 126 - Introduction to Acting
- DRA 220 - Introduction to Scene Study
- DRA 221 - Voice/Verse Practicum I
- DRA 222 - Voice/Verse Practicum II
- DRA 261 - Intro Mus Thtre Perform I
- DRA 262 - Intro Musicl Thtre Perf II
- DRA 305 - Advanced Acting (Drama Minors)
- DRA 320 - Adv Acting: Modern Drama
- DRA 321 - Advanced Voice Practicum I
- DRA 322 - Advanced Voice Verse Practicum II
- DRA 352 - Survey of Theatre History
- DRA 360 - Community Actors Workshop
- DRA 362 - Musical Theater Scene Study
- DRA 405 - Advanced Acting Styles (Drama Minors)
- DRA 420 - Advanced Scene Study: Poetic Drama
- DRA 523 - Audition Technique
- DRA 530 - Advanced Actors Workshop


## Design Courses

- DRD 311 - Scene Design I
- DRD 312 - Scene Design II
- DRD 321 - Theatrical Costume Design I
- DRD 322 - Theatrical Costume Design II
- DRA 328 - Pract. in Stage Makeup


## Academic Courses

- DRA 115 - Intro to Theater
- DRA 116 - Intro to the Theatre
- DRA 260 - Musical Theater Practicum
- DRA 352 - Survey of Theatre History
- DRA 355 - Development of Theater and Drama I
- DRA 356 - Development of Theater and Drama II
- DRA 451 - Topics in Theatrical and Dramatic History
- DRA 452 - Topics in Modern Theater and Drama
- DRA 453 - History of Musical Theater
- DRA 480 - International Course (London Program)
- DRA 315 - Introduction to Play Analysis
- DRA 331 - Introduction to Directing
- DRA 391 - Introduction to Playwriting


## Communication and Rhetorical Studies

Contact Charles Morris III, Interim Chair 100 Sims Hall, 315-443-2308
http://vpa.syr.edu/crs
The Department of Communication and Rhetorical Studies supports a theory-based program emphasizing leadership by developing communication skills and a sophisticated understanding of communication as a creative process. Communication is recognized as central to the development of all things social:
interpersonal relationships, social roles, personal identities, organizational cultures, and the like. Understanding exactly how and why the process works is important to every career. Syracuse's program goes far beyond the common practice of public speaking. Instead, the department emphasizes the full range of communication practices: everyday conversation, group decision making, organizational communication, political communication, speech making, rhetorical criticism, and intercultural communication.

Communication and Rhetorical Studies constitute the fiber with which we weave a framework of interaction among and between people, groups, and society. It is a highly complex process requiring observation, examination, and dynamic personal involvement. A comprehensive education based on a mastery of all the aspects involved in communication and rhetorical studies guarantees the student life-Iong benefits academically, personally, and professionally.

The Department of Communication and Rhetorical Studies at Syracuse University prepares students to become adept thinkers, competent decision makers, and versatile professionals. Individuals skilled in the theory and practice of communication and rhetorical studies have almost unlimited career opportunities. They are found in every business and profession. The majority of communication and rhetorical studies majors pursue careers in internally oriented corporate and organizational communication and/or externally oriented corporate and public information. In recent years, virtually every graduate of the Department of Communication and Rhetorical Studies has received and accepted a challenging job offer, continued on to a professional school, or pursued a graduate degree in communication and rhetorical studies.

The world is increasingly more dependent on a complex system of communication. Individuals equipped with finely tuned skills in the area of communication are highly sought by potential employers and highly valued by society as a whole. The Department of Communication and Rhetorical Studies offers students the opportunity to make the most of their potential by making the most of the program.

The Department of Communication and Rhetorical
Studies is devoted to the study of human symbolic activity, chiefly as it is constituted through spoken language. Communication and rhetorical studies is envisioned as a fundamental human process through which individuals learn to adapt to and create linkages with their social, psychological, and physical environments; develop higher mental processes; and regulate their own behavior as well as that of others. Education in communication and rhetorical studies at Syracuse University focuses on the development of communication competence; students learn
how communication is used in constructing social contexts and in articulating decisions to achieve specific outcomes.

Aware that message-related behaviors vary as participants, settings, and conditions change, departmental faculty use a variety of methods and theories to investigate and explain the richness in human communicative behavior. Appropriately, the Department of Communication and Rhetorical Studies embraces and embodies a pluralistic view in its approach to instruction in communication and rhetorical studies.

The Department of Communication and Rhetorical Studies embraces diversity as a core component in its curricular offerings. People always communicate within particular contexts, creating unique and complex relationships between speakers, messages, audiences, and occasions. Responding to this, the department has ensured that most courses address the concept of diversity and develop students' cultural awareness and ability to adapt and respond to the demands of the communication situations they encounter and create.
Students pursue a B.S. degree in communication and rhetorical studies by taking 36 credits in communication and rhetorical studies, 54 credits in arts and sciences, and 30 credits in Universitywide electives. In this program, students integrate studies in communication and rhetorical studies with courses from other professional schools and the College of Arts and Sciences.
Outstanding students are encouraged to pursue honors in communication and rhetorical studies. Exceptional students may undertake a project of their own choosing under the direction of a faculty member. Project reports are presented at the end of the semester. For further information about the Honors Program, contact the Office of Student Affairs, 200 Crouse College, or the Honors Program, 306 Bowne Hall.

The College of Visual and Performing Arts, through the Syracuse University Abroad (SUAbroad), provides communication and retorical studies majors with the opportunity to study in London or Madrid. Students may participate for a semester or a year. Other programs may be available in Istanbul, and through the World Partner program. Normally, communication and rhetorical studies courses are offered only in the spring semester. Students may choose from courses in communication and rhetorical studies and complete their course loads by selecting from a wide range of courses in arts and sciences, management, public communications, and human services. For further information, contact the Office of Student Affairs, 200 Crouse College, or SUAbroad, 106 Walnut Place (suabroad.syr.edu).

## Major

Communication and Rhetorical Studies, BS

## Contact

Charles Morris III, Department of Communication and Rhetorical Studies
100 Sims Hall, 315-443-2308, cemorris@syr.edu

## Faculty

Richard Buttny, Dana Cloud, Craig Dudczak, Kathleen Feyh, Jeffrey Good, Lynn Greenky, Diane Grimes, Rachel Hall, Kenneth Johnson, Amos Kiewe, Kendall Phillips, Erin Rand, Amardo Rodriguez

## Description

This program allows students to integrate their individual professional interests with a thorough background in communication and rhetorical studies and a selection of arts and sciences courses.

## Program Requirements

Students must complete a total of 120 credits. Of these, 36 credits must be in communication and rhetorical studies. Students must also take 54 credits in arts and sciences, including 6 credits in writing (English); 6 credits in the natural sciences and mathematics; 6 credits in the social sciences; 6 credits in the humanities, including foreign language proficiency at a 102 level (American Sign Language does not fulfill this requirement, although it can be taken as an Arts and Sciences elective); and 30 credits in areas supporting their studies in communication.

## Major Requirements: 36 credits

- CRS 181 - Concepts \& Perspectives in
Communication Studies
- CRS 183 - Concepts and Perspectives in Rhetorical Studies
- CRS 225 - Public Advocacy
- CRS 287 - Foundations of Inquiry in Human Communication
- CRS Electives (x8) 3 credits each

Academic Requirements: 6 credits

[^18]Academic Electives: 78 credits
A\&S Electives (x10) 3 credits each

Humanities (3 credits)
Foreign Language (3 credits)
Natural Science (x2) 3 credits each
Social Science (x2) 3 credits each
General Electives (x10) 3 credits each
Note:
As of the academic year 2005-06, all communication and rhetorical studies majors who also pursue a second major, an additional minor, or attend one of the SUAbroad centers for a semester, are allowed to enroll in up to 57 credits in non-arts-and-sciences courses. This modification means that communication and rhetorical studies majors who fall under one or more of the above categories (double major, minor, or SU Abroad) are no longer required to pursue 54 credits in arts and sciences courses but are given greater flexibility in taking more non-arts-and-sciences courses. Please note that the current requirements, including two writing courses, two humanities courses, two science courses, two social science courses, and a language proficiency at the 102 level (for a total of 27 credits), remain intact.
Total Credits Required: 120
Degree Awarded: BS in Communication and Rhetorical Studies

## Minor

## Communication and Rhetorical Studies Minor

## Coordinator

Charles Morris III, Department of Communication and Rhetorical Studies
100 Sims Hall, 315-443-2308, cemorris@syr.edu

## College/School

College of Visual and Performing Arts

## Description

The minor in communication and retorical studies serves as an excellent complement to almost any major. Students have the opportunity to enhance their communication skills as well as develop a sophisticated understanding of communication processes in a variety of social and professional contexts. To complete the minor, students take one of two introductory survey courses, one of five 200-level theory / skills / application courses, and four elective offerings at
the 300-500 level.

## Admission

- 3.0 GPA (based on completion of 30 credits)
- Must enter program no later than second semester of Sophomore year
- Limited to 30 students
- Applications accepted at any time, but will adhere to an October 15 deadline for processing and approval in the fall semester (March 1 for spring semester)
- To enroll in the communication and rhetorical studies minor, students must complete a petition form (available from the department secretary) and submit it to the department chair for approval.


## Minor Requirements

Required Courses: 6 credits
Choose ONE from the following:

- CRS 181 - Concepts \& Perspectives in Communication Studies
- CRS 183 - Concepts and Perspectives in Rhetorical Studies

Choose ONE from the following:

- CRS 225 - Public Advocacy
- CRS 331 - Interpersonal Communication
- CRS 333-Small Group Communication
- CRS 334 - Introduction to Argumentation

Required Electives: 12 credits
Choose FOUR CRS courses (300-level or above)
Total Credits Required: 18
Leadership/Stewardship
Communication Minor

## Contact

Charles Morris III, Department of Communication and Rhetorical Studies
100 Sims Hall, 315-443-2308, cemorris@syr.edu

## College/School

College of Visual and Performing Arts

## Description

Leadership skills are inherently tied to one's ability to communicate effectively in a variety of situations, including formal presentations,
meetings, the media, and informal conversations. Competent use of one's skills is predicated on a sophisticated understanding of culture, context, process, audience, and principles of rhetoric. The minor in Leadership/Stewardship Communication is designed to enhance the student's understanding of the relationship between communication and leadership and to develop appropriate skills for enhancing leadership. The minor complements many of the University's professional and liberal arts programs, especially those that prepare students for leadership roles in specific professions (law, politics, management, media, community services, and so on).

## Admission

- 3.0 GPA (based on completion of 30 credits)
- Must enter program no later than first semester of Junior year
- Complete petition and submit to department chair for approval
- Petitions accepted at any time, but normally reviewed and approved after October 15 (fall semester) and March 1 (spring semester) deadlines for applications.


## Minor Requirements

## Required Courses: 9 credits

- CRS 225 - Public Advocacy or
- CRS 325 - Presentational Speaking
- CRS 333-Small Group Communication
- CRS 335 - Leadership/Stewardship Communication

Required Electives: 9 credits
Choose THREE from the following:

- CRS 334 - Introduction to Argumentation
- CRS 355 - Political Communication
- CRS 426 - Persuasion
- CRS 430 - Intercultural Communication
- CRS 466 - Ethics in Human Communication
- CRS 568 - Rhetoric of Social Change
- PSC 336 - Political Leadership
- PAF 420 - Interpersonal Conflict Resolution Skills
- PAF 422 - Negotiation: Theory and Practice
- PAF 423 - Leadership: Theory and Practice

Total Credits Required: 18

## Setnor School of Music

Martha L. Sutter, Interim Director 215 Crouse College, 315-443-5892 http://vpa.syr.edu/music
The Setnor School of Music offers opportunities for the highest level of professional musical development and accomplishment in our students within the context of a broad, humanistic education. We encourage the widest possible range of creative options for our students, recognizing that the Western classical tradition continues to grow and expand and that it is only one in a world of myriad others. We believe all our areas of emphasis - instrumental and vocal performance, conducting, music education, music industry, and composition - are interdependent and integral to the success of the school, the health of the profession and the evolution of culture, and we therefore strive for the highest standards in every one of these degree programs. We recognize that inherent in these endeavors is a responsibility to the campus community, the community beyond campus borders, and our culture as a whole. Hence, we are committed to serving a larger public through outreach and education, working to create an inclusive environment in which all can develop their gifts.

A charter member of the National Association of Schools of Music in 1928, the Setnor School of Music has a long tradition of high-quality education for serious music students. Its programs reflect a concern for academics as well as professional studies. The school offers its students opportunities to prepare for careers as performers, composers, arrangers, scholars, teachers, and professionals in the music industry. Students learn from faculty members who are themselves actively involved in music-making. Students, faculty, and visiting artists perform on campus throughout the year, as do symphonic, chamber, opera, and choral groups.
Setnor's four departments offer the Bachelor of Arts degree in music, Bachelor of Music degree in composition, music education, music industry, performance, and sound recording, and the Bachelor of Science degree in entertainment industries. Setnor offers minors in jazz studies, music industry, performance, and private music study. A unique program in music industry allows selected students to pursue a five-year double degree program culminating in a Bachelor of Music in Music Industry from Setnor and a Master of Business Administration from the Martin J. Whitman School of Management.
The school has organic relationships with other entities on campus including the College of Arts and Sciences' Department of Art \& Music Histories, which provides all the core courses in music history, the School of Education, which provides dual enrollment for all music education
majors, and the S.I. Newhouse School of Public Communications and the Martin J. Whitman School of Management for majors in music and entertainment industries. Setnor maintains a professional caliber recording studio in the Bird Library's Belfer Audio Archives, provides all athletic band support for SU Athletics, and collaborates with Hendricks Chapel to provide the University Organist and Hendricks Chapel Choir.

Setnor offers a semester in Los Angeles in cooperation with the S.I. Newhouse School of Public Communications, semesters in London and Strasbourg, and a biannual week in Brazil through SUAbroad. The semester in Strasbourg includes study at the Conservatoire de Strasbourg.
All of Setnor's music ensembles, including bands, choirs, jazz ensembles, symphony orchestra, and chamber ensembles are open to all students on campus. Setnor presents over 200 performances annually during the 28 -week academic year that are open to the public and webcast on the Internet. It also maintains a large inventory of musical instruments including 67 pianos, historic keyboards, four organs, and an inventory of all traditional band and orchestral instruments. The school maintains and operates the Crouse Chimes and historic Setnor Auditorium with its iconic 3,823-pipe Holtkamp organ.
Admission to the Setnor School of Music is via audition. See the website for audition information.

## Academic Offerings

Major

- Music Composition, BMus
- Music Education, BMus
- Music Industry, BMus
- Music, BA
- Organ, BMus
- Percussion, BMus
- Piano, BMus
- Recording and Allied Entertainment Industries, BS
- Sound Recording Technology, BMus
- Strings, BMus
- Voice, BMus
- Wind Instruments, BMus

Minor

- Jazz Studies Minor
- Music Industry Minor
- Music Performance Minor
- Private Music Study Minor


## Major

## Music Composition, BMus

## Contact

Nicolas Scherzinger, Setnor School of Music 120B Crouse College, 315-443-3907, nscherzi@ syr.edu

## Faculty

Joseph Downing, Daniel Godfrey, John Laverty, Nicolas Scherzinger, Andrew Waggoner

## Description

The B.Mus. degree program in composition offers students individual instruction in composition and the opportunity to develop a wide range of musical skills, including solid performance skills on at least one instrument, thorough training in music theory and history, and an exhaustive study of instrumentation and orchestration.

## Program Requirements

In addition to the first-year/sophomore core program, students must complete 62 to 64 credits in other courses, as indicated below. To reflect preparation for upper-division recital(s), upper-division credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Major Requirements: 58 credits

## Principal Performance Area

- MTC 155 -Composition I
- MTC 156 - Composition I
- MTC 255 - Composition II
- MTC 256 - Composition II
- MTC 355 - Composition III
- MTC 356 - Composition III
- MTC 455 - Composition IV
- MTC 456 - Composition IV
- Senior Composition Recital


## Secondary Performance Area

(Keyboard Skills Unless Piano or Organ Student)

- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 535-Orchestration
- MTC 545-Counterpoint
- MTC 546 - Analysis of Contemporary Music
- MTC 560 - Electronic Music Composition

Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
- MTC 566 - Topics in Music Literature and Analysis


## Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence


## Small Ensembles: 2 credits

Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence


## Composition Seminar: 0 credits

- Required for Each Semester in Residence


## Area Specialty/Music Electives: 10 credits <br> - No HOM or Performance Courses

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits
Foreign Language (4 credits)
Social Sciences ( 6 credits)
Arts \& Sciences Electives ( 6 credits)

Free Academic Electives (8 credits)
Total Credits Required: 126
Degree Awarded: BMus in Music Composition

Music Education, BMus

## Music Education (Dual Program)

## Contact:

Elisa Dekaney, 109 Crouse College, 315-4434854 or emdekane@syr.edu

## Education Contacts:

Assistant Directors of Academic Advising, 111 Waverly Avenue, Suite 230, 315-443-9319.

## College of Visual and Performing Arts contact:

Marlene Lee, 200 Crouse College, 315-443-2517

## Faculty

John Coggiola, Elisa Dekaney, Patrick Jones

## Description

The music education program, which leads to a Bachelor or Music degree, is designed to give students a strong foundation in musical and teaching skills and to enable them to obtain initial certification for public school teaching (all grades) in New York State and other states with which there are reciprocal arrangements.
Music education students are dually enrolled in the Setnor School of Music and the School of Education. They may elect one of five emphases: brass, choral/general, woodwind, percussion, or strings. By graduation, students are expected to have achieved competencies in all the musical disciplines (e.g., principal and secondary performance areas, music history and theory, sight-singing and dictation, and conducting and ensemble participation) in addition to teaching competencies in such areas as classroom management techniques and curriculum development skills. Students must have achieved a 3.0 average in music and education courses, with an overall GPA of at least 3.0 before being permitted to enter into the upper division sequence (junior year) and to student teach (senior year). Students also have opportunities to develop techniques of teaching general music as well as techniques for directing performance ensembles.

In addition to writing courses, academic credits are required in the following: 6 credits of social science (psychology or sociology), 3 credits in mathematics, 3 credits in the sciences, and 3 credits of multicultural humanities. One course (minimum 3 credits) in a language other than English (including American Sign Language), or equivalent competency established by examination or level three of high school study is also required. If requirement has already been met in high school or by examination, one 3-credit liberal arts elective must be taken in its place.

## Program Requirements

Major Requirements: 74-76 credits

- PRINCIPAL PERFORMANCE AREA: 11 credits
- SECONDARY PERFORMANCE AREA: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- ENI 510 - Large Bands or
- AMC 545 - Diction in Singing
- AMC 546 - Diction in Singing (choral/general emphasis only)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 147 - Ear Training I
- MTC 246 - Chromatic Harmony II
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 418 - Choral Arranging or
- MUE 415 - Jazz Ensemble Techniques
- MUE 115 - Technology in Music Education
- MUE 215 - Foundations of Music Education
- MUE 310 - Field Experience in Music Education (x2)
- MUE 321 - Teaching of Voice for Schools
- MUE 333 - Music in the Elementary School
- MUE 334 - Methods and Materials in General Music
- MUE 518 - Marching Band Techniques or
- MHL 567 - Choral Literature
- RED 326 - Literacy Across the Curriculum
- SED 340 - Participation in the Professional Development School (x7)
- SPE 412 - Adapting Instruction for Diverse Student Needs
EDU 204 - Principles of Learning in Inclusive


## Classrooms

EDU 310 - The American School
EDU 508 - Student Teaching (12 credits)

## Music Electives: 14 credits

- Instrumental Methods (x3) 1 credit
- Instrumental Methods/Pedagogy 1 credit
- Instrumental/Choral Rehearsal Techniques 3 credits
- Choral or Instrumental Conducting 2 credits
- Jazz elective (x3) 1 credit
- Piano or Voice (x2) 1 credit


## Music History and Literature: 12

 credits- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914


## Ensembles: 7 credits

## Weekly Student Convocations: 0

 credits- Required for Each Semester in Residence

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing


## Academic Electives: 18-19 credits

- Foreign Language 3-4 credits
- Social Sciences (sociology or psychology) 6 credits
- Mathematics 3 credits
- Sciences 3 credits
- Multicultural Humanities 3 credits


## Note:

Consult with the School of Education, 111 Waverly Avenue, suite 230, regarding other New York State Teacher Certification requirements for graduation and certification.

Total Credits Required: 132
Degree Awarded: BMus in Music Education

## Music Industry, BMus

## Contact

William DiCosimo, Setnor School of Music 119 Crouse College, 315-443-1216, wjdicosi@ syr.edu

## Faculty

James Abbott, William DiCosimo, Ulf Oesterle, David Rezak

## Description

The B.Mus. music industry program prepares students to be competent musicians, and to comprehend, understand and analyze the rapidly changing advances in the industry. Students study and discuss the implications of current trends as they become familiar with the realities of general business and the creative and legal practices of the music business. In classes and through guest lectures and mentoring by leading industry professionals, students learn about professional organizations and their role in the industry.
The program also provides students with unprecedented opportunities to continue their education and broaden their skills and portfolio with graduate degree programs. In partnership with the Whitman School of Management, Setnor now offers the MUI/MBA 5-year dual degree program where B.Mus. music industry students who qualify can stay a $5^{\text {th }}$ year and achieve an MBA. For students who have an interest in arts administration and non-profit music management students can enter into the M.A. in Arts Leadership program. There are also graduate programs in music performance and an M.S. certification in music education.

## Program Requirements

Students are required to achieve 5 credits of music industry practicum (internships). There are opportunities in the immediate campus area during the academic year and numerous opportunities with high-profile music industry businesses in major metropolitan areas such as New York City.

## Music Industry Requirements: 42 credits

- MUI 103 - Music Industry Forum
- MUI 203 - Music Industry Forum
- MUI 303 - Music Industry Forum
- MUI 403 - Music Industry Forum
- MUI 200 - Selected Topics
- MUI 205 - Music Industry I
- MUI 206 - Music Industry II
- MUI 305 - Music Industry and the Media
- MUI 307 - Studio Recording
- MUI 310 - Soyars Leadership Lecture Series
(x6) 1 credit each
MUI 308 - Live Sound and Concert Recording or
- MUI 409 - Advanced Digital Audio Workstation Production
- MUI 402 - Current State of the Music Industry
- MUI 405 - Music Industry Law and Ethics
- MUI 408 - Music Industry Practicum
- MUI Elective (3 credits)
- RAE 404 - Social Media for the Music Business


## Music Requirements: 33 credits

- PRINCIPAL PERFORMANCE AREA (11 credits)
- SECONDARY PERFORMANCE AREA (4 credits) (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV


## Music History and Literature: 12 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914


## Large Ensembles: 7 credits

- One Large Ensemble Required for Each of 7 Semesters in Residence

Small Ensembles: 2 credits
Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Academic Requirements: 21

## UNDERGRADUATE COURSE CATALOG

## credits

- WRT 105 - Studio 1: Practices of Academic Writing

WRT 205 - Studio 2: Critical Research and Writing

- PSY 205 - Foundations of Human Behavior
- SOC 101 - Introduction to Sociology
- ECN 203 - Economic Ideas and Issues
- MAR 301 - Essentials of Marketing

MGT 355 - Strategic Human Resource Management

Academic Electives 3 credits

## Study Abroad

During their academic career, industry students have the opportunity to study abroad in London and Strasbourg or spend a semester interning and taking classes in L.A.

Total Credits Required: 120
Degree Awarded: BMus in Music Industry

Music, BA

## Contact

Janet Brown, Advisor, Setnor School of Music 124B Crouse College, 315-443-5892, janbrown@ syr.edu

## Faculty

All Setnor School of Music Faculty

## Description

The Bachelor of Arts (B.A.) program in music provides a unique opportunity to blend extensive professional work in music with studies in the liberal arts. It allows students who wish to earn a degree in music the opportunity to devote more time to liberal arts studies than is permitted in the program leading to the Bachelor of Music (B.Mus.) degree. Students accepted into the B.A. program must complete the same core of creative and professional music study.

## Admission

Students accepted into the B.A. program must meet the same audition and admission standards required of other Setnor School of Music applicants.

## Program Requirements

At least 44 credits are taken in The College of Arts and Sciences. At least 63 credits must be taken in music courses and 15 to 19 credits are apportioned to special music courses that support the principal performance area (or music electives), and to academic electives.

The Arts and Sciences requirements consist of 6 credits in writing (English), 8 credits in foreign language, and 6 credits in each of the following groups plus an additional 6 credits in each of two of the following groups: the social sciences; the natural sciences/mathematics; and humanities.

## Major Requirements: 34 credits

- PRINCIPAL PERFORMANCE AREA (12 credits)
- SECONDARY PERFORMANCE AREA (4 credits) (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV


## Music History and Literature: 15 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)


## Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence

Small Ensembles: 2 credits
Weekly Student Convocations: 0 credits

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and

Writing

## Music Electives: 9 credits

- Upper Level Courses Only; No HOM or Performance Courses

Academic Electives: 38 credits
Foreign Language (8 credits)
Social Sciences (6 credits)
Natural Sciences/Mathematics (6 credits)
Humanities (6 credits)
Focus area I ( 6 credits)
Focus area II ( 6 credits)
Free Electives: 14 credits
Total Credits Required: 126
Degree Awarded: BA in Music
Organ, BMus

## Contact

Steven Heyman, Chair, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Faculty

Anne Laver

## Description

The performance program stresses the development of technical skills, repertory, poise, and overall musicianship. Since most performers continue study beyond the bachelor's degree, the program also provides a sound basis for advanced study. To reflect preparation for upper-division recital(s), upper-division credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Program Requirements

Major Requirements: 52 credits

- Principal Performance Area: 24 credits
- Secondary Performance Area: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 545 - Counterpoint
- MTC 546 - Analysis of Contemporary Music
- Junior Composition Recital 0 credits
- Senior Composition Recital 0 credits


## Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
- MTC 566 - Topics in Music Literature and Analysis

Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence


## Small Ensembles: 4 credits

Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Area Specialty/Music Electives: 14-16 credits

- No HOM Courses Allowed

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits
Foreign Language (4 credits)
Social Sciences ( 6 credits)
Arts \& Sciences Electives ( 6 credits)
Free Academic Electives (8 credits)

## Total Credits Required: 126

Degree Awarded: BMus in Organ

## Percussion, BMus

## Contact

Steven Heyman, Chair, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Faculty

Michael Bull, Joshua Dekaney

## Description

The performance program stresses the development of technical skills, repertory, poise, and overall musicianship. Since most performers continue study beyond the bachelor's degree, the program also provides a sound basis for advanced study. To reflect preparation for upper-division recital(s), upper-division credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Program Requirements

Major Requirements: 52 credits

- Principal Performance Area: 24 credits
- Secondary Performance Area: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 545 - Counterpoint
- MTC 546 - Analysis of Contemporary Music
- Junior Composition Recital 0 credits
- Senior Composition Recital 0 credits

Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914

MHL 268 - European and American Music Since 1914

- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
- MTC 566 - Topics in Music Literature and Analysis


## Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence

Small Ensembles: 2 credits
Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence


## Area Specialty/Music Electives:

14-16 credits

- No HOM Courses Allowed

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits
Foreign Language (4 credits)
Social Sciences (6 credits)
Arts \& Sciences Electives ( 6 credits)
Free Academic Electives (8 credits)
Total Credits Required: 126
Degree Awarded: BMus in Percussion

Piano, BMus

## Contact

Steven Heyman, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Faculty

Steven Heyman, Fred Karpoff, Ida Tili-Trebicka

## Description

The performance program stresses the development of technical skills, repertory, poise, and overall musicianship. Since most performers continue study beyond the bachelor's degree, the program also provides a sound basis for advanced study. To reflect preparation for upper-division recital(s), upper-division credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Program Requirements

Major Requirements: 52 credits

- PRINCIPAL PERFORMANCE AREA: 24 credits
- SECONDARY PERFORMANCE AREA: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 545 - Counterpoint
- MTC 546 - Analysis of Contemporary Music
- Junior Composition Recital 0 credits
- Senior Composition Recital 0 credits

Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
- MTC 566 - Topics in Music Literature and Analysis


## Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence

Small Ensembles: 2 credits

## Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Area Specialty/Music Electives: 14-16 credits

- No HOM Courses Allowed


## Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing


## Academic Electives: 24 credits

Foreign Language (4 credits)
Social Sciences ( 6 credits)
Arts \& Sciences Electives (6 credits)
Free Academic Electives (8 credits)
Total Credits Required: 126
Degree Awarded: BMus in Piano
Recording and Allied Entertainment Industries, BS

## Contact

Ulf Oesterle, Setnor School of Music 207 Crouse College, 315-443-3119, uoesterl@ syr.edu

## Faculty

James Abbott, William DiCosimo, Ulf Oesterle, David M. Rezak

## Description

The Bandier Program for Music and the Entertainment Industries (Recording and Allied Entertainment Industries (RA) is a multidisciplinary program housed within the Setnor School of Music in the College of Visual and Performing Arts. The program leads to a Bachelor of Science degree, and includes an understanding of music, communications, business, and entrepreneurship. It provides a global view of music and its role in entertainment media. The program relies on additional coursework in the S.I. Newhouse School of Public Communications, the Whitman School of Management, and the College of Arts and Sciences. A strong liberal arts component rounds out the program. Using industry-leading
alumni and friends, plus the University's vast resources, this unique program prepares students to compete in the fast-paced, ever-evolving entertainment industry.

The Bandier Program has been designed with input from some of the most respected executives in music and entertainment. These high-ranking leaders, many of whom are alumni, are committed to ongoing involvement as visiting lecturers in the Soyars Leadership Lecture Series.

## Prerequisites for Admission into the Major

There are no audition or performance requirements for admission into the program.

## Program Requirements

Major Requirements: 32-37 credits

- MUI 103 - Music Industry Forum
- MUI 203 - Music Industry Forum
- MUI 205 - Music Industry I
- MUI 206 - Music Industry II
- MUI 303 - Music Industry Forum (taken junior year in SYR)
- MUI 305 - Music Industry and the Media
- MUI 307 - Studio Recording
- MUI 310 - Soyars Leadership Lecture Series (x8) (each semester unless in L.A.) 1 credit each
- MUI 403 - Music Industry Forum
- RAE 404 - Social Media for the Music Business
- RAE 408 - Entertainment Industry Practicum
- RAE 444 - Law for The Music \& Entertainment Industries
- RAE 501 - Reconciling Arts and Commerce: Arts Entrepreneurship

Music Industry Electives: 8 credits

- Only MUI or RAE Courses Allowed


## Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing


## Liberal Arts Requirements: 79 credits

- ACC 201 - Essentials of Accounting
- COM 107-Communications and Society
- COM 506 - Communications Law for Television, Radio, Film
- CRS 325 - Presentational Speaking
- ECN 203 - Economic Ideas and Issues
- EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
- HOM 195 - Performance Live
- HOM - History of Music (x4) 3 credits each
- MAR 301 - Essentials of Marketing
- TRF 235 - Principles and Practices: TelevisionRadio, Film Industries
- MAT 121 - Probability and Statistics for the Liberal Arts I or
- MAT 183 - Elements of Modern Mathematics
- Math Requirements
- Foreign Language or A\&S electives 6 credits
- Social Sciences 6 credits
- Natural Sciences/Math 3 credits
- Humanities Electives 6 credits
- Liberal Arts Electives 6 credits
- Newhouse/Whitman/VPA elective 3 credits
- Whitman elective 3 credits
- General Elective 3 credits


## Study Abroad

Students are encouraged to take real-life experiences in the form of internships (experience credit), and to pursue particular areas of interest within the industry with independent study courses. Juniors and seniors have the option of spending a semester in Los Angeles, California. They are also encouraged to study the rapidly evolving global business environment in London. An LA and/or London semester internship is one of several encouraged and coordinated by the program.

## Total Credits Required: 125

Degree Awarded: BS in Recording and Allied Entertainment Industries

Sound Recording Technology, B.Mus.

## Contact

James Abbott, Setnor School of Music
406 Crouse College, 315-443-4107, jsabbott@ syr.edu

## Faculty

James Abbott, William DiCosimo

## Description

The sound recording technology program provides technologically inclined musicians with the practical and theoretical background needed for success in today's music production industry. The program provides a multidisciplinary fouryear Bachelor of Music degree with coursework in music, acoustics, sound production, new media design, computer science, and mathematics. Particular emphasis is placed on audio engineering as a technical-artistic field, recognizing that audio professionals often serve as the interface connecting the technical and artistic personnel in the music industry.
The program provides extensive project experience in state-of-the art studios where students record, produce, mix, and master sound recordings. Students also develop technical and managerial skills that are essential to the profession. A high level of cross-disciplinary collaboration is encouraged, with exposure to production techniques for many musical styles and media deliverables. Students graduate with a portfolio of work that includes classical, world, popular, and jazz styles delivered on traditional formats alongside new industry standards such as webbased media and video games.

Possible careers include work as a recording engineer, producer, programmer, musician, and technical engineer. The program also provides a foundation for graduate work in engineering and computer science.

## Prerequisites for Admission

Evidence of Pre-Calculus

## Program Requirements

## Sound Recording Technology Requirements: 45 credits

- MUI 103 - Music Industry Forum
- MUI 104 - Music Industry Forum
- MUI 203 - Music Industry Forum
- MUI 204 - Music Industry Forum
- MUI 205 - Music Industry I
- MUI 206 - Music Industry II

MUI 301 - Record Production
MUI 303 - Music Industry Forum

- MUI 304 - Music Industry Forum

MUI 307 - Studio Recording

- MUI 308 - Live Sound and Concert Recording
- MUI 309 - Studio Acoustics
- MUI 321 - Concert Recording I
- MUI 322 - Concert Recording II
- MUI 403 - Music Industry Forum
- MUI 408 - Music Industry Practicum
- MUI 409 - Advanced Digital Audio Workstation Production
- MUI 411 - Recording Studio Management I
- MUI 412 - Recording Studio Management II
- MUI 414 - Music Technology Practicum
- MUE 115 - Technology in Music Education
- MTC 500 - Workshop In Music Theory Performing with Computers
MTC 560 - Electronic Music Composition


## Music Requirements: 33 credits

- PRINCIPAL PERFORMANCE AREA: 11 credits
- SECONDARY PERFORMANCE AREA: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV


## Music History and Literature: 12 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914


## Large Ensembles: 7 credits

- One Large Ensemble Required for Each of 7


## UNDERGRADUATE COURSE CATALOG

## Semester in Residence

Small Ensembles: 1 credit
Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Music Electives: 6 credits
Academic Requirements: 19 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing
- PSY 205 - Foundations of Human Behavior
- ECS 102 - Introduction to Computing
- PHY 211 - General Physics I
- PHY 221 - General Physics Laboratory I

MAT 295 - Calculus I
Transmedia Elective: 3 credits
Free Electives 3 credits
Total Credits Required: 129
Degree Awarded: BMus in Sound Recording Technology

Strings, BMus

## Contact

Steven Heyman, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Faculty

Peter Povey

## Description

The performance program stresses the development of technical skills, repertory, poise, and overall musicianship. Since most performers continue study beyond the bachelor's degree, the program also provides a sound basis for advanced study. To reflect preparation for upper-division recital(s), upper-division credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Program Requirements

Major Requirements: 52 credits

- PRINCIPAL PERFORMANCE AREA: 24 credits
- SECONDARY PERFORMANCE AREA: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 545 - Counterpoint
- MTC 546 - Analysis of Contemporary Music
- Junior Composition Recital 0 credits
- Senior Composition Recital 0 credits


## Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
- MTC 566 - Topics in Music Literature and Analysis

Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence

Small Ensembles: 4 credits
Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Area Specialty/Music Electives: 14-16 credits

- No HOM Courses Allowed

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits
Foreign Language (4 credits)
Social Sciences (6 credits)
Arts \& Sciences Electives ( 6 credits)
Free Academic Electives (8 credits)
Total Credits Required: 126
Degree Awarded: BMus in Strings

Voice, BMus

## Contact

Steven Heyman, Chair, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Faculty

Janet Brown, Eric Johnson, Kathleen RolandSilverstein, Julianna Sabol

## Description

The performance program leads to the B.Mus. degree and stresses the development of technical skills, repertory, poise, and overall musicianship. Since most performers continue study beyond the bachelor's degree, the program also provides a sound basis for advanced study. To reflect preparation for upper-division recital(s), upperdivision credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Program Requirements

Major Requirements: 52 credits

- PRINCIPAL PERFORMANCE AREA: 24 credits
- SECONDARY PERFORMANCE AREA: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 545 - Counterpoint
- MTC 546 - Analysis of Contemporary Music
- Junior Composition Recital 0 credits
- Senior Composition Recital 0 credits

Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
- MTC 566 - Topics in Music Literature and Analysis

Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence

Small Ensembles: 4 credits
Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence

Area Specialty/Music Electives:
14-16 credits

- No HOM Courses Allowed

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits
Foreign Language ( 4 credits)
Social Sciences ( 6 credits)
Arts \& Sciences Electives ( 6 credits)
Free Academic Electives (8 credits)
Total Credits Required: 126
Degree Awarded: BMus in Voice

## Wind Instruments, BMus

## Contact

Steven Heyman, Chair, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Faculty

Various Setnor School of Music Faculty

## Description

The performance program stresses the development of technical skills, repertory, poise, and overall musicianship. Since most performers continue study beyond the bachelor's degree, the program also provides a sound basis for advanced study. To reflect preparation for upper-division recital(s), upper-division credits in the principal performance area increase from 2 to 4 credits per hour of instruction.

## Program Requirements

Major Requirements: 52 credits

- PRINCIPAL PERFORMANCE AREA: 24 credits
- SECONDARY PERFORMANCE AREA: 4 credits (Keyboard Skills Unless Piano or Organ Student)
- CTG 545 - Basic Conducting
- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV
- MTC 545 - Counterpoint
- MTC 546 - Analysis of Contemporary Music
- Junior Composition Recital 0 credits
- Senior Composition Recital 0 credits

Music History and Literature: 18 credits

- MHL 168 - History of European Music before 1750
- MHL 185 - Introduction to World Music
- MHL 267 - European Music from 1750-1914
- MHL 268 - European and American Music Since 1914
- MHL 500 Level or above (3 credits)
- MHL 566 - Topics in Music Literature and Analysis or
MTC 566 - Topics in Music Literature and Analysis


## Large Ensembles: 8 credits

- One Large Ensemble Required for Each Semester in Residence

Small Ensembles: 4 credits
Weekly Student Convocations: 0 credits

- Required for Each Semester in Residence


## Area Specialty/Music Electives:

14-16 credits

- No HOM Courses Allowed

Academic Requirements: 6 credits

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Academic Electives: 24 credits
Foreign Language (4 credits)
Social Sciences (6 credits)
Arts \& Sciences Electives ( 6 credits)
Free Academic Electives (8 credits)
Total Credits Required: 126
Degree Awarded: BMus in Wind Instruments

## Minor

Jazz Studies Minor

## Coordinator

John Coggiola, Setnor School of Music
202C Shaffer Arts Building, 315-443-5896, jccoggio@syr.edu

## College/School

College of Visual and Performing Arts / Setnor School of Music

## UNDERGRADUATE COURSE CATALOG

## Description

The Minor in Jazz Studies is designed for students from any degree program on campus, including music majors, who want to develop and improve their knowledge and skills in instrumental or vocal jazz. This 18 -credit program draws from the entire array of the jazz offerings in the Setnor School of Music including jazz performing ensembles, jazz history, jazz arranging and theory, jazz applied lessons and jazz education. The specific requirements are as follows:

## Admission

- Meet with Setnor School of Music advisor prior to beginning the program.
- 3.0 GPA in at least one jazz performing ensemble.
- Positive recommendation from the Director of Jazz Studies


## Minor Requirements

## Core Requirements

## 4 Ensemble credits

- ENI 520 - Small Bands
- ENV 520 - Small Chorus
- ENC 540 - Chamber Music/Woodwinds
- ENC 560 - Chamber Music/Percussion


## 4 Jazz Improvisation credits

- MTC 555 - Jazz Improvisation I
- MTC 556 - Jazz Improvisation II
- MTC 557 - Jazz Improvisation III
- MTC 558 - Jazz Improvisation IV


## 3 Jazz History credits

- MHL 466 - History of Jazz
- MHL 500 - Selected Topics

MHL 566 - Topics in Music Literature and Analysis

## Required Electives: 7 credits

The remaining 7 credits are selected through advisement from the following:

Music Theory:

- MTC 125 - Introductory Music Theory *
- MTC 225 - Sight-singing for Non Music Majors ।*

MTC 100 - Jazz Piano

- MTC 200 - Jazz Piano
- MTC 300 - Selected Topics Jazz Piano
- MTC 400 - Selected Topics Jazz Piano
- MTC 100 - Jazz Guitar
- MTC 200 - Jazz Guitar
- MTC 300 - Selected Topics Jazz Guitar
- MTC 400 - Selected Topics Jazz Guitar
- MTC 100 - Jazz Double Bass
- MTC 200 - Jazz Double Bass
- MTC 300 - Selected Topics Jazz Double Bass
- MTC 400 - Selected Topics Jazz Double Bass
- MTC 100 - Jazz Drums
- MTC 200 - Jazz Drums
- MTC 300 - Selected Topics Jazz Drums
- MTC 400 - Selected Topics Jazz Drums
- MTC 100 - Jazz Saxophone
- MTC 200 - Jazz Saxophone
- MTC 300 - Selected Topics Jazz Saxophone
- MTC 400 - Selected Topics Jazz Saxophone
- MTC 100 - Jazz Trumpet
- MTC 200 - Jazz Trumpet
- MTC 300 - Selected Topics Jazz Trumpet
- MTC 400 - Selected Topics Jazz Trumpet
- MTC 100 - Jazz Trombone
- MTC 200 - Jazz Trombone
- MTC 300 - Selected Topics Jazz Trombone
- MTC 400 - Selected Topics Jazz Trombone
- MTC 100 - Jazz Voice
- MTC 200 - Jazz Voice
- MTC 300 - Selected Topics Jazz Voice
- MTC 400 - Selected Topics Jazz Voice
- MTC 555 - Jazz Improvisation I
- MTC 556 - Jazz Improvisation II
- MTC 557 - Jazz Improvisation III
- MTC 558 - Jazz Improvisation IV
- MTC 551 - Songwriting
- MTC 552 - Studio Arranging
- MTC 554 - Jazz Composing and Arranging

Music Major level theory classes *

- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV

Music History and Literature:

- MHL 466 - History of Jazz
- MHL 500 - Selected Topics Jazz topics vary from semester to semester
- MHL 566 - Topics in Music Literature and Analysis Jazz topics vary from semester to semester
- Any HOM Jazz History class (different offerings each semester)

Music Industry:

- MUI 205 - Music Industry I **
- MUI 206 - Music Industry II **


## Ensembles:

- ENI 520 - Small Bands Jazz Ensemble
- ENI 520 - Small Bands Jazz Combo
- ENC 540 - Chamber Music/Woodwinds Super Sax Ensemble
- ENV 520 - Small Chorus Vocal Jazz Ensemble
- ENC 560 - Chamber Music/Percussion Brazilian Ensemble


## Music Education:

- MUE 415 - Jazz Ensemble Techniques


## Total Credits: 18

## Restrictions

*These classes will only apply to students outside of the School of Music.
**These classes will not count toward the Minor in Jazz Studies if a student is enrolled in the Bachelor of Music Industry or Bandier program.

## Music Industry Minor

## Coordinator

William DiCosimo, Setnor School of Music 119 Crouse College, 315-443-1216, wjdicosi@ syr.edu

## College/School

College of Visual and Performing Arts / Setnor School of Music

## Description

The Setnor School of Music offers two minor plans for non-music majors who wish to learn about the creative, business, and legal aspects of the music industry.

## Admission

To enroll in either music industry minor, students must apply to the coordinator of the music industry program. Auditions for private lessons and ensembles may be required for acceptance into Minor Plan II. The minor program is highly competitive, with a limited number of spaces. Application is encouraged before the beginning of the sophomore year and is required before the beginning of the junior year.

## Minor Requirements

At least 12 credits in courses 300 level or above must be completed for this minor.

## Minor Plan I: 21 credits

## Required Courses: 15 credits

- MUI 205 - Music Industry I
- MUI 206 - Music Industry II
- MUI 305 - Music Industry and the Media
- MUI 405 - Music Industry Law and Ethics
- Upper-level History Music Course 3 credits

Required Electives: 6 credits
Choose TWO from the following:

- MUI 307 - Studio Recording
- MUI 308 - Live Sound and Concert Recording
- MUI 402 - Current State of the Music Industry
- MUI 406 - Topics in Music Industry
- MUI 408 - Music Industry Practicum

Music Industry Forum
(1 credit each semester. Only 2 credits may be applied to minimum requirement for the minor.)

- MUI 303 - Music Industry Forum
- MUI 304 - Music Industry Forum
- MUI 403 - Music Industry Forum
- MUI 404 - Music Industry Forum


## Minor Plan II: 21 credits

## Required Courses: 14 credits

- MUI 106 - Survey of the Music Industry
- MTC 125 - Introductory Music Theory
- MUI 405 - Music Industry Law and Ethics
- Upper-level History Course

Choose ONE from the following:

- MHL 364 - History of American Popular Music
- HOM 385 - Structure and Meaning in World Music
- MHL 466 - History of Jazz
- Other upper- division MHL course with permission of instructor (3 credits)


## Required Electives: 7 credits

Select 7 credits from the following:

- MUI 305 - Music Industry and the Media
- MUI 307 - Studio Recording
- MUI 308 - Live Sound and Concert Recording
- MUI 402 - Current State of the Music Industry
- MUI 406 - Topics in Music Industry
- MUI 408 - Music Industry Practicum


## Music Industry Forum

( 1 credit each semester. Only 2 credits may be applied to minimum requirement for the minor.)

- MUI 303 - Music Industry Forum
- MUI 304 - Music Industry Forum
- MUI 403 - Music Industry Forum
- MUI 404 - Music Industry Forum


## Applied Music and Ensemble

Students may, pending audition, register for applied music and/or ensemble; only 2 credits may be applied to minimum requirements for the minor.

## Total Credits Required: 21

Music Performance Minor

## Coordinator

Justin Mertz, Setnor School of Music 402 Crouse College, 315-443-5752, jjmertz@syr. edu

## College/School

College of Visual and Performing Arts / Setnor School of Music

## Description

The Minor in Music Performance is designed for students with the requisite musical ability and interest to apply and further their previous training and experience in instrumental and vocal music.

This program draws from the entire array of the Setnor School of Music's ensemble offerings, running the gamut from such ensembles as the University Orchestra, Percussion Ensemble, Symphony Band, Concert Choir, Brazilian Ensemble, Contemporary Music Ensemble, and many more.
By completion of the minor, students will have had opportunities to perform in a varied assortment of ensembles, helping them to be capable of continued music making throughout their adult lives.

## Admission

- At least one full semester of ensemble participation.
- Positive recommendation in writing from any ensemble director or conducting faculty.
- 3.0 GPA in at least one ensemble.


## Minor Requirements

The Minor in Music Performance requires 18 credits of coursework. Of these, 8 credits must be in Setnor School of Music performing ensembles; any class with the prefix ENI, ENV, or ENC meets this requirement. The remaining 10 credits can be selected from an assortment of courses offered by the Setnor School of Music and can include additional ensembles, private lessons, courses in music theory, music history and literature, conducting, music industry, and music education. It is expected that at least 6 credits will be chosen from the listed courses. This will be monitored by careful advising. Other music courses as they appear each semester may be taken by permission of advisor. No courses taken for zero credit will count toward the minor.

## Required Courses: 8 credits

- SSoM Performing Ensembles (8 credits)

Required Electives: 10 credits

- Additional ensembles, private lessons, music theory, music history and literature, conducting, music industry, and music education (4 credits)
- And at least 6 credits chosen from the list below:


## Music Theory Courses:

- MTC 125 - Introductory Music Theory
- MTC 225 - Sight-singing for Non Music Majors I
- MTC 100 - Jazz Piano
- MTC 200 - Jazz Piano
- MTC 300 - Selected Topics Jazz Piano
- MTC 400 - Selected Topics Jazz Piano

MTC 100 - Jazz Guitar

- MTC 200 - Jazz Guitar
- MTC 300 - Selected Topics Jazz Guitar
- MTC 400 - Selected Topics Jazz Guitar
- MTC 100 - Jazz Double Bass
- MTC 200 - Jazz Double Bass
- MTC 300 - Selected Topics Jazz Double Bass
- MTC 400 - Selected Topics Jazz Double Bass
- MTC 100 - Jazz Drums
- MTC 200 - Jazz Drums
- MTC 300 - Selected Topics Jazz Drums
- MTC 400 - Selected Topics Jazz Drums
- MTC 100 - Jazz Saxophone
- MTC 200 - Jazz Saxophone
- MTC 300 - Selected Topics Jazz Saxophone
- MTC 400 - Selected Topics Jazz Saxophone
- MTC 100 - Jazz Trumpet
- MTC 200 - Jazz Trumpet
- MTC 300 - Selected Topics Jazz Trumpet
- MTC 400 - Selected Topics Jazz Trumpet
- MTC 100 - Jazz Trombone
- MTC 200 - Jazz Trombone
- MTC 300 - Selected Topics Jazz Trombone
- MTC 400 - Selected Topics Jazz Trombone
- MTC 100 - Jazz Voice
- MTC 200 - Jazz Voice
- MTC 300-Selected Topics Jazz Voice
- MTC 400 - Selected Topics Jazz Voice
- MTC 551 - Songwriting
- MTC 555 - Jazz Improvisation I
- MTC 556 - Jazz Improvisation II
- MTC 557 - Jazz Improvisation III
- MTC 558 - Jazz Improvisation IV


## Music History and Literature:

- MHL 466 - History of Jazz
- MHL 500 - Selected Topics Advanced Orchestral Repertoire
- MHL 500 - Selected Topics
- MHL 535 - Orchestral Repertoire: 1600-1800
- MHL 566 - Topics in Music Literature and Analysis


## Music Industry, Music Education, and Conducting

- AMC 500 - Selected Topics Alexander Technique
CTG 545 - Basic Conducting
- MUE 518 - Marching Band Techniques
- MUI 106 - Survey of the Music Industry
- MUI 400 - Selected Topics Fundamentals of Music Industry
- MUI 400 - Selected Topics The Independent Music Marketplace


## Total Credits: 18

## Restrictions

Students pursuing the B.A. or B.M. in the Setnor School of Music are ineligible for this minor.

## Private Music Study Minor

## Coordinators

## Keyboard

Steven Heyman, Setnor School of Music 310 Crouse College, 315-443-1638, sheyman@ syr.edu

## Percussion

Joshua Dekaney, Setnor School of Music 301 Crouse College, 315-443-2191, jadekane@ syr.edu

## Guitar

Kenneth Meyer, Setnor School of Music 121B Crouse College, 315-443-2765, kmeyer@ syr.edu

## College/School

College of Visual and Performing Arts / Setnor School of Music

## Description

The Minor in Private Music Study is designed for students from any degree program on campus, except those in the Setnor School of Music, who want to study music privately on guitar, drum set, piano or organ. Students who perform other instruments may petition to be accepted into the Minor in Private Music Study. The specific requirements are as follows: 4 semesters of private lessons (4-8 credits) and 10-14 credits of private lessons, ensembles, or other music courses through advisement.

## Admission

- Meet with designated Setnor School of Music advisor prior to beginning the program.
- 3.3 ( $\mathrm{B}+$ ) GPA in one semester of lessons.
- At least one full semester of private study on their instrument with a School of Music applied instructor. Positive recommendation in writing from their applied instructor.


## Minor Requirements

The Minor in Private Music Study requires eighteen credits of coursework. Of these, a minimum of 4 credits must be in School of Music applied lessons. The remaining 14 credits can be selected from an assortment of courses offered by the School of Music and can include additional lessons, ensembles, courses in music theory, music history and literature, conducting, music industry, and music education. This will be monitored by careful advising. 12 credits in the minor should be at the 300 level or higher. Other music courses as they appear each semester may be taken by permission of the advisor. No courses taken for zero credit will count toward the minor.

## Drumset/Non Music Majors

- DRS 110 - Drumset Instruction
- DRS 210 - Drumset Instruction
- DRS 310 - Drumset Instruction
- DRS 410 - Drumset Instruction


## Guitar/Non Music Majors

- GTR 160 - Classical Guitar Instruction
- GTR 260 - Classical Guitar Instruction
- GTR 360 - Classical Guitar Instruction
- GTR 460 - Classical Guitar Instruction


## Organ/Non Music Majors

- ORG 110-Organ Instruction
- ORG 210-Organ Instruction
- ORG 310-Organ Instruction
- ORG 410-Organ Instruction


## Piano/Non Music Majors

- PNO 120 - Piano Instruction
- PNO 220 - Piano Instruction
- PNO 320 - Piano Instruction
- PNO 420 - Piano Instruction


## Remaining 14 Credits

The remaining 14 credits can be selected from an assortment of courses offered by the School of Music and can include additional lessons, ensembles, courses in music theory, music history and literature, conducting, music industry, and music education. This will be monitored by careful advising. Twelve credits in the minor should be at the 300 level or higher. Other music courses

## UNDERGRADUATE COURSE CATALOG

as they appear each semester may be taken by permission of the advisor. No courses taken for zero credit will count toward the minor. A preliminary list of existing courses suitable for students in the Minor in Music Performance is below.

## Applied Lessons:

## Drumset/Non Music Majors

- DRS 110 - Drumset Instruction
- DRS 210 - Drumset Instruction
- DRS 310 - Drumset Instruction
- DRS 410 - Drumset Instruction


## Guitar/Non Music Majors

- GTR 160 - Classical Guitar Instruction
- GTR 260 - Classical Guitar Instruction
- GTR 360 - Classical Guitar Instruction
- GTR 460 - Classical Guitar Instruction

Organ/Non Music Majors

- ORG 110-Organ Instruction
- ORG 210-Organ Instruction
- ORG 310-Organ Instruction
- ORG 410 - Organ Instruction

Piano/Non Music Majors

- PNO 120 - Piano Instruction
- PNO 220 - Piano Instruction
- PNO 320 - Piano Instruction
- PNO 420 - Piano Instruction


## Music Theory Courses:

- MTC 125 - Introductory Music Theory
- MTC 225 - Sight-singing for Non Music Majors I
- MTC 100 - Jazz Piano
- MTC 200 - Jazz Piano
- MTC 300 - Selected Topics Jazz Piano
- MTC 400 - Selected Topics Jazz Piano
- MTC 100 - Jazz Guitar
- MTC 200 - Jazz Guitar
- MTC 300 - Selected Topics Jazz Guitar
- MTC 400 - Selected Topics Jazz Guitar
- MTC 100 - Jazz Drums
- MTC 200 - Jazz Drums
- MTC 300 - Selected Topics Jazz Drums
- MTC 400 - Selected Topics Jazz Drums
- MTC 100 - Jazz Voice
- MTC 200 - Jazz Voice
- MTC 300 - Selected Topics Jazz Voice
- MTC 400 - Selected Topics Jazz Voice
- MTC 551 - Songwriting
- MTC 555 - Jazz Improvisation I
- MTC 556 - Jazz Improvisation II
- MTC 557 - Jazz Improvisation III
- MTC 558 - Jazz Improvisation IV

Music Major level theory classes

- MTC 145 - Diatonic Harmony I
- MTC 146 - Diatonic Harmony II
- MTC 147 - Ear Training I
- MTC 148 - Ear Training II
- MTC 245 - Chromatic Harmony I
- MTC 246 - Chromatic Harmony II
- MTC 247 - Ear Training III
- MTC 248 - Ear Training IV


## Music History and Literature:

- MHL 535 - Orchestral Repertoire: 1600-1800
- MHL 500 - Selected Topics Advanced Orchestral Repertoire
- MHL 466 - History of Jazz
- MHL 566 - Topics in Music Literature and Analysis
- MHL 500 - Selected Topics: Topics vary from semester to semester
- Any HOM Music History class


## Music Industry, Music Education, and Conducting

- CTG 545 - Basic Conducting
- MUE 518 - Marching Band Techniques
- MUI 205 - Music Industry I
- MUI 206 - Music Industry II
- AMC 500 - Alexander Technique


## Ensembles

- Any ENI ensemble
- Any ENC ensemble
- Any ENV ensemble


## Total Credits: 18

## Restrictions

Students pursuing the B.A. or B.M. in the Setnor School of Music are ineligible for this minor.

## Art and Design

Advertising Design

## ADD 241 - Advertising Principles

School of Art and Design
3 credit(s) At least 1x fall or spring
The study and practice of the tenets common to award winning advertising.

## ADD 242 - Strategy in Advertising

School of Art and Design
3 credit(s) At least 1x fall or spring
Process involved in developing advertisements from a concise marketing strategy. PREREQ: ADD 241

## ADD 281 - Advertising Design Methods

## School of Art and Design

3 credit(s) At least 1x fall or spring Introduces design principles and production techniques, emphasizing visual, digital, and intellectual skills for the communication of ideas and their translation into print. PREREQ: FND 113 AND FND 115 COREQ: ADD 241

## ADD 282 - Advertising Design Skills and Processes

## School of Art and Design

3 credit(s) At least 1x fall or spring
Furthers the use of Macintosh technology and software as design and production tools for print media.
PREREQ: ADD 281
COREQ: ADD 242

## ADD 341 - Advertising Campaigns

## School of Art and Design

3 credit(s) At least 1x fall or spring
Recognition and implementation of the "big" idea as the basis of print advertising campaigns. PREREQ: ADD 242

## ADD 342 - Advertising Problem Solving

## School of Art and Design

3 credit(s) At least 1x fall or spring Development of sound rationales for creation of advertising campaigns. Research, target audience identification, problem definition, and design. PREREQ: ADD 341

## ADD 440 - Ad Design Research Problems

## School of Art and Design

3 credit(s) At least 1x fall or spring Individual development in specialized areas of advertising design.

PREREQ: ADD 441
Repeatable 1 time(s), 6 credits maximum

## ADD 441 - Campaign Refinement

School of Art and Design
3 credit(s) At least 1x fall or spring
The refinement of campaign concepts and their finished execution.
PREREQ: ADD 341

## ADD 442 - Final Portfolio

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Final execution of campaigns, resumes, and selfpromotion pieces.
PREREQ: ADD 441

## ADD 443 - Television Concepts

## School of Art and Design

3 credit(s) At least 1x fall or spring Creating and developing distinctive TV concepts from the marriage of words, pictures, and motion. PREREQ: ADD 341

## ADD 444 - TV Commercial Production

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: ADD 644
Video techniques in the production of advertising commercials. Major emphasis on computer video editing. Introduction to camera work and sound. PREREQ: ADD 443
Repeatable 1 time(s), 3 credits maximum

## ADD 453 - Communication Arts/ London

## School of Art and Design

3 credit(s) Irregularly
Illustration and design through visits to studios, publishers, museums, and presentations with visiting professionals. Major design/illustration semester project. Offered only in London.

## ADD 454 - Communication Arts/ London

## School of Art and Design

3 credit(s) Irregularly
Illustration and design through visits to studios, publishers, museums, and presentations with visiting professionals. Major design/illustration semester project. Offered only in London.

## ADD 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

ADD 540-0ffset Printing<br>School of Art and Design<br>3 credit(s) Irregularly<br>A basic course covering the theory and practice of preparing camera-ready art for printing platemaking, and printing by offset lithography.<br>PREREQ: CMD 281

## Art Education

## AED 211 - The Creative Classroom: <br> Reexamining School Art <br> Misconceptions Through Studio Inquiry

## School of Art and Design

3 credit(s) At least 1 x fall or spring A studio art course that disrupts misconceptions about the relevance of the arts and design practices in education through arts-based inquiry.

## AED 300 - Selected Topics

School of Art and Design
1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## AED 317 - Philosophy \& Foundations of Art Education Practice

School of Art and Design
3 credit(s) At least 1x fall or spring
Double Numbered with: AED 617
Historical trends and philosophies of diverse art education practices and the growth of American public education. Includes field observations, interface with cultural institutions, cultivation of professional affiliations, and the development of a beginning teaching philosophy.

## AED 470 - Experience Credit

## School of Art and Design

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Student must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## AED 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## AED 510 - Special Problems in Art Ed

## School of Art and Design

1-6 credit(s) At least 1 x fall or spring
Individual study of particular problems in
art education which are of pertinence to the student. Counseling and consent of the instructor determine the area of study.

## AED 521 - Art-Centered Art Curriculum

## School of Art and Design

3 credit(s) Irregularly
Ten approaches to writing art curricula: referential, chronological, stylistic, topical, special interest, specific artist, collection-related, integrating, multidisciplinary, enrichment. Development of classroom material for specific levels or particular audiences. For senior and graduate art majors.

## AED 522 - Art for Special Populations

## School of Art and Design

3 credit(s) Irregularly
Effective personal communication through art. Choose and define a special population; examine and generate appropriate research; develop adaptive strategies, curriculum, and evaluation procedures appropriate for classroom use. For senior and graduate art majors.

## AED 524 - Visual Language

## School of Art and Design

3 credit(s) Irregularly
Visual language as catalyst for interdisciplinary experiences in art, math, science, and social studies. Visualization, determination of essential features, methods of teaching surrogate and relational form. Curriculum for specific grades or particular audiences. For senior and graduate art majors.

## AED 525 - Exploration \& Meaning in Art

## School of Art and Design

3 credit(s) Irregularly
Using phenomenological encounter techniques, symbol interpretation, and consideration of cultural context, students learn to argue a point of view and develop methods of critical judgment in their students. For senior and graduate art majors

## AED 584 - Cultural Knowledge, Identity, and Postmodern Art Education

## School of Art and Design

3 credit(s) At least 1x fall or spring
A course providing a safe space for arts educators and teaching artists to reconceptualize their language, attitudes, and approaches toward viewing, learning, and teaching the visual arts to diverse students in a global postmodern society.

## Art Photography

## APH 242 - Art Photography Intro II

School of Art and Design
3 credit(s) Every semester

In-depth study of color photographic techniques. Processing, printing, and historical and contemporary models.

## APH 243 - Digital Imaging for Art Photo

## School of Art and Design

3 credit(s) Every semester
Art Photography students explore the applications of digital and electronic photography as an art form. Using their own scanned photographs and digital camera images, students will utilize the computer to construct new art work.

## APH 261 - Art Photography, Introduction

## School of Art and Design

3 credit(s) Every semester Introduction to analog and digital photography, beginning with 35 mm camera basics, film processing and printing. Correlating digital processes (basic film scanning, etc.) will be taught alongside their analog counterparts.

## APH 262 - Art Photography Introduction II

## School of Art and Design

3 credit(s) Every semester
In-depth study of analog and digital photographic techniques. Printing and output from digital and film sources, color control and calibration. use of flash and simple lighting techniques.

## APH 263 - Art Photography: Advanced Digital Imaging

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Designed to give students the skills to employ the latest techniques in digital imaging. Topics covered include: digital workflow, advanced color corrections, compositing techniques, color management and color profiling.
PREREQ: APH 261 AND APH 262

## APH 340 - Topics in Art Photography

## School of Art and Design

3 credit(s) Every semester
Topics selected before registration by the department and specified in the time schedule. Repeatable

## APH 341 - Art Photography Intermediate

## School of Art and Design

3 credit(s) At least 1 x fall or spring
Development of a personal style and an extended body of work. Use of contemporary and historical models to explore technical, critical, and aesthetic issues.

## APH 342 - Art Photography Intermediate II

## School of Art and Design

3 credit(s) At least 1x fall or spring Continuation of APH 341. Presentations, issues, and assignments based on the work of contemporary and historical photographic artists to explore the visual issues raised by these artists.

## APH 361 - Lighting for Photography

## School of Art and Design

3 credit(s) Every semester
Lighting techniques for the photography studio and on location. Students use digital, medium and large format cameras on group and individual assignments. Critical study of the interaction between fashion, cinema and fine art photography. PREREQ: APH 263

## APH 362 - Art Photography Junior Seminar

## School of Art and Design

3 credit(s) At least 1x fall or spring Wide range of contemporary photographic practices. Students are encouraged to experiment with assignments that address specific conceptual issues, such as how artists formulate their selfidentity, inspiration and attitude.
PREREQ: APH 361

## APH 461 - Art Photography: BFA Senior Seminar

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Students propose and develop their own projects which will be reviewed in individual and group critiques. Working closely with faculty, students, utilize technical, conceptual, and visual tools to evaluate and expand their own work. Preq: APH
362
PREREQ: APH 362

## APH 462 - Art Photography: BFA Exhibition and Portfolio

## School of Art and Design

3 credit(s) At least 1x fall or spring Students refine their own projects which will be reviewed in individual and group critiques. Development of skills to create a professional quality exhibition, portfolio, and artist presentation.
PREREQ: APH 461

## APH 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## APH 561 - Art Photography: Contemporary Art and Photography

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Contemporary artists working with photographic images are studied through slides, readings, lectures, and discussions.

## APH 562 - Art Photography: Contemporary Critical \& Theoretical Texts on Art \& Photography

## School of Art and Design

3 credit(s) At least 1x fall or spring Recent and contemporary critical theories and applications studied through readings, lectures, and discussion. Emphasis on student research papers.

## APH 563 - Art Photography: NonTraditional Modes

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Exploring the possibilities and reasons for producing work outside the parameters of traditional practice, looking at artists whose work co-opts, challenges and eschews the gallery system, using those artists as models for their own production.

## APH 564 - Image/Sequence: Photo Book

## School of Art and Design

3 credit(s) At least 1x fall or spring Theoretical and critical discussion of photographs in series, sequences and books. Software for editing and layout introduced to produce photo-based artist books. Specific attention paid to how the photo-book expands the meaning of individual images.

## APH 565 - Art Photography: <br> Performance Art

## School of Art and Design

3 credit(s) At least 1x fall or spring This course introduces the concepts, techniques, and variations of performance art. Special emphasis on performances made expressly for the camera will be considered. Many examples of performance art are analyzed.

## APH 566 - Art Photography: Photography and Cinema

## School of Art and Design

3 credit(s) At least 1x fall or spring Students explore the interplay between contemporary photography and cinema. By constructing sets, scouting locations, studying images and films, and appropriating cinematic language, students will create photographic works influenced by moving images.

## Art

## ART 101 - First Year Colloquium

School of Art and Design
1 credit(s)
A variety of art and design topics including all major areas in School of Art and Design. Lectures and discussions with visiting artists, alumni, and faculty; presentations on current issues in the field.

## ART 105-Color \& Light

## School of Art and Design

3 credit(s) At least 1x fall or spring
Physical and psychological aspects of light and color. Systems of color classification. Application to the artist's usage.

## ART 111 - History of Modern Art: 1850-Present

## School of Art and Design

3 credit(s) At least 1 x fall or spring Art from 1900 to present. Lectures, readings, discussion, and written assignments develop visual literacy, critical and communication skills integral to understanding art within its historical, social, and cultural context.

## ART 112-Special Topics in History of Art

## School of Art and Design

3 credit(s) At least 1x fall or spring
Selected themes and issues that connect art from the earliest times to the present. School of Art and Design student.
Repeatable

## ART 113 - History of Modern Design: 1850-Present

## School of Art and Design

3 credit(s) At least 1x fall or spring
Lectures, readings, discussion, and written assignments develop visual literacy, critical, and communication skills integral to understanding design within its historical, social, and cultural context.

## ART 114 - Special Topics in History of Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Selected themes and issues that connect design from the earliest time to the present. School of Art and Design student.
Repeatable

## ART 202 - Contemporary Issues in Design

School of Art and Design
3 credit(s) At least 1x fall or spring
Crosslisted with: DES 202
Overviews contemporary issues and trends in 21 st century design.

## ART 205 - History of Textiles

School of Art and Design
3 credit(s) Irregularly
Development of textile design and construction. Lecture and research.

## ART 207 - History of Ceramics

## School of Art and Design

3 credit(s) Upon sufficient interest Forms of ceramic design and techniques that appear throughout history. Their relation to contemporary production.

## ART 250 - Filmmaking: Cinematic Modes

School of Art and Design
3 credit(s) Every semester
Topics will focus around codes and forms that work at the mainstream and borders of cinematic production.
Repeatable

## ART 251 - Intro to Art Media

## School of Art and Design

3 credit(s) At least 1x fall or spring Basic course in media aesthetics on the role of photographic and electronic media. Provides a context for discussion of contemporary art media.

## ART 253 - Survey of Film History

## School of Art and Design

3 credit(s) At least 1x fall or spring
Growth of film from its origin. Technical, economic, and social influence on cinema; development of film as an art.

## ART 300 - Selected Topics

## School of Art and Design

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## ART 310 - Picasso and the Modern Movement: Critical Approaches to Modern Art

## School of Art and Design

3 credit(s)
Introduction to important periods in Picasso's life, key modern art movements and theories, and
specific objects across a variety of media, and situate these within an appropriate historical and art historical context. This course will also use Picasso as a case study for examining various methodologies employed in analyzing the visual arts.
PREREQ: ART 111 OR ART 113 OR HOA 106

## ART 311 - Aesthetics

## School of Art and Design

3 credit(s) Irregularly
Major classical and contemporary issues in the philosophy of art including definitions or art, representation, style, signs and meaning, social theories of art and recent developments in art theory.

## ART 314 - History of the Bauhaus: Studies in Material Culture

## School of Art and Design

3 credit(s)
An overview of the Bauhaus, its important personalities, and its contribution to the development of twentieth-century design and architecture.
PREREQ: ART 111 OR ART 113 OR HOA 106

## ART 316 - Introduction to Visual Culture

## School of Art and Design

3 credit(s)
Crosslisted with: CRS 316, TRM 316
Introduction to critical approaches that illuminate how modes of visual culture function as rhetoric, commerce, art, and ideological expression. Examines how institutional frameworks shape global image circulation.

## ART 340 - Visiting Artist Lecture Series

## School of Art and Design

1 credit(s) Every semester
Double Numbered with: ART 640
Contemporary artists and art educators with significant national and international exhibition and publishing records talk about their work and its development, including art-historical and other inter-disciplinary connections. Additional work required of graduate students.
Repeatable 5 time(s), 6 credits maximum

## ART 361 - Studio Symposium

## School of Art and Design

3 credit(s) Every semester
Double Numbered with: ART 561
Seminar discussions from artist's point of view on issues, theories, criticism in contemporary art. Visiting artists, critics, faculty participation. Reading and paper required. Individual research in conjunction with course expectations for students taking ART 561.

## ART 406 - Advanced Color \& Light

## School of Art and Design

3 credit(s) Upon sufficient interest Lecture/studio. Principles of color and light. Recent color theories and systems applicable to visual arts.

## ART 410 - Topics in the History of Art

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: ART 610
A seminar in the history of and theory of the visual arts from ancient times to the present. Topics vary. Discussions incorporate current theory, recent scholarship, and problems addressed in contemporary art. Additional work required of graduate students.
Repeatable 1 time(s), 6 credits maximum

## ART 411 - History of Japanese Design: Studies in Material Culture

## School of Art and Design

3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: HOA 491
Survey of design in Japan (pre-historical times to present), and influence of Japanese design on the West. Examines works in different media and situates these within a historical and cultural context.
PREREQ: ART 113

## ART 431 - Art Nouveau Design and Architecture: Studies in Material Culture

## School of Art and Design

4 credit(s)
Double Numbered with: ART 631
Introduction to the historical and social context that gave rise to Art Nouveau, its various
manifestations, and the important practitioners and promoters of this movement in Europe and the United States.
PREREQ: (ART 111 OR HOA 106) AND ART 113

## ART 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## ART 500 - Selected Topics

School of Art and Design
1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

ART 511 - Aesthetics, Advanced

School of Art and Design
3 credit(s) Upon sufficient interest An examination of the main theories of art, classical and contemporary.

## ART 531 - Professional Practices in

 Visual ArtsSchool of Art and Design
3 credit(s) At least $1 x$ fall or spring Prepare students to function in professional context by understanding professional interactions, possibilities they have to choose from, what questions to ask and what might be expected of them. Skills fundamental to the working artist.

## ART 553 - Decoding Images of Representation

## School of Art and Design

3 credit(s) At least 1 x fall or spring This course examines significant themes and issues in contemporary theory and criticism as they impact the ways in which art is produced, viewed and written today.

## ART 561 - Studio Symposium

School of Art and Design
3 credit(s) Every semester
Double Numbered with: ART 361
Seminar discussions from artist's point of view on issues, theories, criticism in contemporary art. Visiting artists, critics, faculty participation. Reading and paper required. Individual research in conjunction with course expectations for students taking ART 561.

## ART 563 - Art in America I

School of Art and Design
3 credit(s) At least 1x fall or spring Evolution of modernist trends in American art from 1890 to 1945. Some music and literary trends also featured.

## ART 564 - Art in America II

## School of Art and Design

3 credit(s) At least 1x fall or spring Continuation of ART 563. Covers period in American art from 1945 to 1975. Music and literature also covered.
PREREQ: ART 563

## Computer Art

CAR 101 - Introduction to 3D Animation and Visual Effects

School of Art and Design
3 credit(s) At least 1x fall or spring The first course in this three course series
focuses on concepts, aesthetics, and practice of 3D animation and visual effects. This course is an introduction to modeling, texturing, digitalsculpting and shading.

CAR 111 - Introduction to Programming for Visual and Networked Art

## School of Art and Design

3 credit(s) At least 1x fall or spring An introductory course that combines the programming/scripting of digital art projects with thinking about software, interactive digital art, and digital culture.

## CAR 120 - Experimental Animation

## School of Art and Design

3 credit(s) At least 1x fall or spring Introductory studio course explores animation through the use of various processes. Students will experiment with claymation, collage/cut paper, direct drawing, and stop motion. Emphasis on use of conventional materials and approaches.

## CAR 131 - Introduction to Multimedia

## School of Art and Design

3 credit(s) Every semester
The fundamentals for making art with computers in consideration of time and interactivity. The fundamentals of using programming and software applications for multimedia and the internet.

## CAR 201 - Intermediate 3D Animation and Visual Effects

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
The second course in this three course series focuses on concepts, aesthetics, and practice of 3D animation and visual effects. This course will be an introduction to keyframe, procedural and character animation.
PREREQ: CAR 101

## CAR 211 - Introduction to Electronics and electronic Object Making for Art

## School of Art and Design

3 credit(s) At least 1x fall or spring An introductory level physical computing class. The course covers electrical and mechanical engineering techniques for the purpose of art and cultural production.

## CAR 230 - Topics in Computer Gaming I

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Exploring computer gaming topics assigned at the outset of the semester. Topics may include mobile gaming, pervasive gaming, self-made alternative game controllers for existing games, or 3D gaming.

## CAR 233-2D Computer Gaming

## School of Art and Design

3 credit(s) At least 1x fall or spring Introduction to various software techniques and programming concepts that are central to creating computer games in 2 D environments. Experimental practices and critical theory associated with this field will supplement the practical lessons.

## CAR 240 - Multimedia Programming

## School of Art and Design

3 credit(s)
Techniques for creating procedural, data-driven, and interactive visuals, as well as cultural issues regarding the nature of online communication.
May not be repeated for credit.
PREREQ: CAR 111

## CAR 241 - Audio Production and Recording I

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring The course will focus on digital audio production in the media arts. Emphasis on the relationship between sound and image. Topics include studio recording, field recording, microphone and mixing techniques.

## CAR 270 - Experience Credit

## School of Art and Design

1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## CAR 301 - Advanced 3D Animation and Visual Effects

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
The third course in this three course series focuses on concepts, aesthetics, and practice of 3D animation and visual effects. This course will be an introduction to lighting, rendering, and effects (hair, cloth, and dynamics).
PREREQ: CAR 201

## CAR 302 - Previz and Character Development for Animation

## School of Art and Design

3 credit(s) Irregularly
This course will get you inside your animation and game characters. Who are they? Where did they come from? Why are they holding that chainsaw?

## CAR 330 - Topics in Computer Gaming II

## School of Art and Design

3 credit(s) Upon sufficient interest
This course focuses on ambitious gaming projects in a collaborative environment. Students will work in groups to design, develop, and implement a computer game. Platform and delivery format will vary

## CAR 340 - Computer Gaming

## School of Art and Design

3 credit(s)
Techniques for creating computer games. Explores gaming theory, strategy, and aesthetics. May not be repeated for credit.
PREREQ: CAR 240

## CAR 341 - Audio Production and Recording II

## School of Art and Design

3 credit(s) Upon sufficient interest This course will build on the foundation of CAR 241. Includes advanced sound mix, mastering, installation and delivery formats, and advanced wave form synthesis.
PREREQ: CAR 241

## CAR 401 - Animation Workshop I

## School of Art and Design

3 credit(s) At least 1x fall or spring Integrate skills and knowledge gained in the first three animation courses into full-on, industrystyle production. You will work collaboratively on ambitious projects, participating in every aspect of production of an animated short film. PREREQ: CAR 301

## CAR 402 - Visual Effects Workshop I

## School of Art and Design

3 credit(s) At least 1x fall or spring
A focus on the prospect of integrating the 2D and 3D worlds within the context of contemporary visual effects, while developing clear professional based workflows to be implemented in future creative art practice.

## CAR 415 - History of Animation

School of Art and Design
3 credit(s) Irregularly
Viewing, discussing, writing and reading about examples from many periods foster a context for contemporary practice in this dynamic medium.

## CAR 430 - Computer Art Seminar

School of Art and Design
3 credit(s)
Students will propose and complete a major individual or collaborative studio project.

PREREQ: SENIOR LEVEL
Repeatable 1 time(s), 9 credits maximum

## CAR 432 - Senior Project

## School of Art and Design

3 credit(s) At least 1x fall or spring
To focus the best creative and intellectual resources in the realization of the senior project and portfolio. Pursue areas of personal interest and to explore new ideas in the realization of their artistic goals.
PREREQ: CAR 430 AND SENIOR LEVEL

## CAR 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under
the supervision of a faculty member
Repeatable 2 time(s), 3 credits maximum

## CAR 501 - Animation Workshop II

School of Art and Design
3 credit(s) At least 1x fall or spring
Building on the collaborative animation experience from the first semester of the animation workshop, students step into supervisor roles helping to manage all aspects of the production of an animated short film. PREREQ: CAR 401

## CAR 502 - Visual Effects Workshop II

## School of Art and Design

3 credit(s) At least 1x fall or spring Building on the collaborative VFX experience from the first semester of the VFX workshop, students step into supervisor roles helping to manage all aspects of the production team(s) workflow. PREREQ: CAR 402

## CAR 520 - Topics in Electronic Environments

## School of Art and Design

3 credit(s) Irregularly
A practical, project-based exploration of computer art that happens across computational devices, platforms, and spaces. Semester topics may include networked public spaces, audiovisual performance, mobile applications for activism. Repeatable 1 time(s), 6 credits maximum

## CAR 530 - Special Topics in Computer Art

## School of Art and Design

3-12 credit(s) Irregularly
Various topics in computer graphics are explored through research, creative activity, and theoretical discussion. Topics address historical as well as contemporary issues that bridge art and technology.
PREREQ: CAR 101
Repeatable

## Ceramics

## CER 220 - Raku Workshop

## School of Art and Design

3 credit(s) Every semester
Use of the potter's wheel and production of various basic forms. Raku decorating and glazing techniques.
Repeatable

## CER 221 - Introduction to Ceramics

## School of Art and Design

3 credit(s) Every semester
Techniques and materials. Basic hand building. Development of personal direction.

## CER 222 - Introduction to Ceramics

School of Art and Design
3 credit(s) Every semester
Continuation of CER 221. Use of potter's wheel.
Experimentation with glazes and other methods of decoration. Personal direction encouraged.
PREREQ: CER 221

## CER 223 - Intro Ceramic Wheel Throwing

## School of Art and Design

3 credit(s) Every semester
Potter's wheel as a creative tool. Basic techniques and wheel-thrown forms. Experimentation with decorating techniques.

## CER 224 - Intro Ceramic Wheel Throwing

## School of Art and Design

3 credit(s) Every semester
Potter's wheel as a creative tool. Basic techniques and wheel-thrown forms. Experimentation with decorating techniques.
PREREQ: CER 223

## CER 321 - Intermediate Ceramic Sculpture

## School of Art and Design

3 credit(s) Every semester
Creating unique ceramic forms and developing techniques and considerations. Experimentation with forms, materials, and sculptural concepts.
PREREQ: CER 221 AND CER 222

## CER 322 - Intermediate Ceramic Sculpture

## School of Art and Design

3 credit(s) Every semester
Creating unique ceramic forms and developing techniques and considerations. Experimentation with forms, materials, and sculptural concepts. PREREQ: CER 221 AND CER 222

## CER 323 - Intermediate Wheel Throwing

## School of Art and Design

3 credit(s) Every semester
Techniques and concepts related to the design and production of multiples of a form using the potter's wheel.
PREREQ: CER 223 AND CER 224

## CER 324 - Intermediate Wheel

 ThrowingSchool of Art and Design
3 credit(s) Every semester
Techniques and concepts related to the design and production of multiples of a form using the potter's wheel.
PREREQ: CER 223 AND CER 224

## CER 327 - Clay \& Glaze Technology

## School of Art and Design

3 credit(s) Odd academic yr e.g. 2007-8
Plaster and mold making, formulation and mixing of glazes and clay bodies. Maintenance of kilns and other studio equipment. Lecture and studio. Term paper required.
PREREQ: CER 221 AND CER 223

## CER 328 - Clay \& Glaze Technology

## School of Art and Design

3 credit(s) Odd academic yr e.g. 2007-8
Plaster and mold making, formulation and mixing of glazes and clay bodies. Maintenance of kilns and other studio equipment. Lecture and studio.
Term paper required.
PREREQ: CER 327

## CER 421 - Advanced Ceramic Sculpture

## School of Art and Design

3 credit(s) Every semester
Techniques and concepts in the sculptural possibilities of ceramics. Students complete several projects to develop related concepts and techniques.
PREREQ: CER 321 AND CER 322

## CER 422 - Advanced Ceramic Sculpture

## School of Art and Design

3 credit(s) Every semester
Techniques and concepts in the sculptural possibilities of ceramics. Students complete several projects to develop related concepts and techniques.
PREREQ: CER 321 AND CER 322

## CER 423 - Advanced Wheel Throwing

School of Art and Design
3 credit(s) Every semester
Continuation of CER 323,324. Realistic shop
situation in which records of time, kiln space,
and cost of materials are kept. Work on several projects to strengthen techniques and further develop as an artist.
PREREQ: CER 323 AND CER 324

## CER 424 - Advanced Wheel Throwing

School of Art and Design
3 credit(s) Every semester
Continuation of CER 323,324. Realistic shop
situation in which records of time, kiln space, and cost of materials are kept. Work on several projects to strengthen techniques and further develop as an artist.
PREREQ: CER 323 AND CER 324

## CER 427 - Advanced Ceramic Techniques

## School of Art and Design

3 credit(s) Odd academic yr e.g. 2007-8
Application at a professional level of information acquired in CER 327, 328.
PREREQ: CER 327 AND CER 328

## CER 428 - Advanced Ceramic Techniques

## School of Art and Design

3 credit(s) Odd academic yr e.g. 2007-8
Application at a professional level of information
acquired in CER 327,328.
PREREQ: CER 327 AND CER 328

## CER 520 - Raku Workshop

## School of Art and Design

3 credit(s) Every semester
Use of the Potter's wheel and production of various basic forms. Raku decorating and glazing techniques.
Repeatable

## CER 524 - Ceramic Research

## School of Art and Design

1-6 credit(s) Every semester
Advanced research.
PREREQ: CER 423 AND CER 424

## CER 527 - Ceramic Technology Research

## School of Art and Design

1-6 credit(s) Odd academic yr e.g. 2007-8
Varied technical and chemical problems that are the daily concerns of the studio ceram-ist. Lectures, research, shop, laboratory practices, kiln construction, and ceramic studio maintenance.

## CER 528 - Ceramic Technology Research

## School of Art and Design

1-6 credit(s) Odd academic yr e.g. 2007-8
Varied technical and chemical problems that
are the daily concerns of the studio ceram-ist. Lectures, research, shop, laboratory practices, kiln construction, and ceramic studio maintenance. PREREQ: CER 428

## CER 529 - Ceramics Workshop

## School of Art and Design

1-6 credit(s) Upon sufficient interest Working and experimenting with clay as a medium for drawing, painting, and sculpting. Lectures, demonstrations, studio work, and student projects. Open to all students in all colleges.

## Communication Design

## CMD 104 - Fundamentals of Communications Design

## School of Art and Design

3 credit(s) At least 1x fall or spring Introduction to processes, materials, methods required for creation and production of visual communications. Typography, image creation, communication, layout.
PREREQ: DES 101 AND 103
COREQ: DES 102

## CMD 251 - Intro Communication Design I

## School of Art and Design

3 credit(s) At least 1 x fall or spring
Survey of concepts, methods, techniques, and media used to solve graphic design problems. COREQ: CMD 281

## CMD 252 - Intro Communication Design II

## School of Art and Design

3 credit(s) At least 1x fall or spring Continuation of CMD 251. Emphasizes typography, layout, and three-dimensional design projects. PREREQ: CMD 251 AND CMD 281
COREQ: CMD 282

## CMD 270 - Experience Credit

## School of Art and Design

1-6 credit(s) Irregularly
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## CMD 281 - Design Methods

School of Art and Design
3 credit(s) At least 1 x fall or spring Introduces design principles and production techniques, emphasizing visual, manual, and
intellectual skills for communication of ideas and their translation through traditional methods into print.
COREQ: CMD 251

## CMD 282 - Design Skills \& Processes

School of Art and Design
3 credit(s) At least 1x fall or spring Introduces Macintosh technology and software programs as design and production tools for print media. Application of tools and software to create solutions to traditional visual communications' problems.
PREREQ: CMD 251 AND CMD 281
COREQ: CMD 252

## CMD 351 - Problem Solving Strategies

## School of Art and Design

3 credit(s) At least 1x fall or spring
Thinking, creativity, and communication theory as applied to design problem solving. Students encouraged to explore and develop their own personal style of thinking and overcome obstacles inhibiting creativity.
PREREQ: CMD 252 AND CMD 282
COREQ: CMD 450
CMD 352 - Design Project Management

## School of Art and Design

3 credit(s) At least 1x fall or spring Research, planning, development, and art direction of complex, multifaceted projects.
PREREQ: CMD 351 AND CMD 450

## CMD 450 - Communication Design Problems

## School of Art and Design

1-6 credit(s) Every semester Individual instruction in various areas of editorial design. In mixed-level groups, students develop projects according to individual interests and abilities. Strategic planning based on research and marketing principles. CMD 450 students also develop writing and presentation skills.
PREREQ: CMD 252 AND CMD 282
Repeatable

## CMD 451 - Design Research

## School of Art and Design

3 credit(s) At least 1x fall or spring Research as background for solving communication design problems. Exercises and projects simulate actual professional experiences. PREREQ: CMD 351 AND CMD 450

## CMD 452 - Portfolio \& Practice

## School of Art and Design

3 credit(s) At least 1x fall or spring
Career planning and portfolio preparation for the
designer.
PREREQ: CMD 351 AND CMD 450

## CMD 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## CMD 550-Communication Design

 Problems
## School of Art and Design

1-6 credit(s) Every semester
Individual instruction in various areas of editorial design. In mixed-level groups, students develop projects according to individual interests and abilities. Strategic planning based on research and marketing principles. CMD 450 students also develop writing and presentation skills. Repeatable

## Design

## DES 101 - Design Concepts

## School of Art and Design

3 credit(s) At least 1x fall or spring Introduction to core concepts and skills including design thinking and research, design visualization, and core elements of design.
COREQ: DES 103

## DES 102 - Design Applications

## School of Art and Design

3 credit(s) At least 1x fall or spring
Builds on the core concepts and skills learned in DES 101 to prepare students to select and enter a major within the Design Department. Application of iterative design processes in response to problem definition, constraints, and design techniques.
PREREQ: DES 101 AND 103
COREQ: CMD 104 OR EDI 104 OR FAS 104 OR
IND 104

## DES 103 - Introduction to Design Thinking

## School of Art and Design

3 credit(s) At least 1x fall or spring
Introduction to design thinking and research methodologies, collaborative work processes, and introduction of specific applications of design thinking to individual design disciplines and practices.
COREQ: DES 101

## DES 121 - Design Odyssey

## School of Art and Design

3 credit(s)
A gateway experience exploring the nature of
design creativity and multi-disciplinary problem solving.

## DES 143 - Visual Presentation and Drawing for Designers

School of Art and Design
3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 143
Drawing techniques in freehand sketching and rendered presentations for design practice.
Problems in quick techniques and various media.

## DES 144 - Drafting for Designers

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 144
Orthographic Drawing techniques and practices for designing.

## DES 145 - Introductory Environmental Design I

## School of Art and Design

3 credit(s) At least 1x fall or spring Crosslisted with: EDI 145
Concepts used in decision making and tools necessary for translating these concepts into visual statements.

## DES 146 - Fundamentals of Environmental + Interior Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 104
Design relationships and coordinates as determinates of functional, structural, and aesthetic qualities of interior environments; the physical/cultural context and method for translating programmatic requirements into threedimensional design decisions. Overview and application of elements and principles of design. PREREQ: (EDI 143 OR FND 113) AND (EDI 145 OR FND 115 OR FND 117)
COREQ: EDI 144

## DES 201 - Design, Cultural Traditions and the Environment

## School of Art and Design

3 credit(s) At least 1x fall or spring
Evolution of exterior and interior architecture and decorative arts in relation to environment and mode of life throughout history. Traces design history through the lens of sustainable practices.

## DES 202-Contemporary Issues in Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: ART 202
Overviews contemporary issues and trends in

21st century design.

## DES 246 - Analysis of Color for

 Production
## School of Art and Design

3 credit(s) At least 1 x fall or spring Color theory for decorative design. Effect of color selection, media, and rendering techniques on production. Introduction to professional color research.

## DES 248 - Design Issues

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Issues of design in relationship with sustainable systems, technology, organic design, the humanities, social sciences, and natural/physical sciences. Interaction between design and other disciplines.

## DES 252 - Environmental Design II

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 252
Medium-scale space planning, tenant development, interior design, and documentation for the humane work environment and public spaces. Corporate structure, sustainability, materials, lighting, and construction methods.

## DES 267 - Textiles for Designers

## School of Art and Design

3 credit(s)
Overview of important textile fibers, yearns, and fabric constructions related to end-use applications in design.

## DES 270 - Experience Credit

## School of Art and Design

1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## DES 281 - Design Symposium

## School of Art and Design

1 credit(s) Every semester
Visiting professionals examine and discuss design disciplines.
Repeatable 2 time(s), 3 credits maximum

## DES 300 - Selected Topics

## School of Art and Design

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest
to faculty and students in a particular semester.

## DES 302 - Design Thinking \& Ideas

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: DES 602
Introduction of major theories and writings about design within a historical context. Provide students with a theoretical toolkit for exploring design and other creative work.

## DES 305 - Digital Design Techniques I

## School of Art and Design

3 credit(s) Every semester
Double Numbered with: DES 605
Explores the capabilities of industry-standard design software to develop and preflight multipage layouts for printed distribution, with precise control over typography and composition. Projects stress essential design and pre-press techniques applicable to all design disciplines. Additional work required of graduate students.

## DES 306 - Digital Design Techniques II

## School of Art and Design

3 credit(s) Every semester
Double Numbered with: DES 606
Introduces students to the two central practices of today's designers, creating vector illustrations and manipulating digital imagery. Using industrystandard design software, assignments provide practical experience for generating professional illustrations and image-based work. Additional work required of graduate students.

## DES 307 - Digital Design Techniques III

## School of Art and Design

3 credit(s) Every semester Double Numbered with: DES 607
Introduces students to the industry-leading programming environment for producing interactive content on the web, smartphones, tablets, and televisions. Assignments provide practical experience for generating professional animated work.

## DES 341 - Fabrication Skills and Methods

## School of Art and Design

3 credit(s) At least 1x fall or spring
Double Numbered with: DES 641
Introduction to wood and metal shop construction techniques for design fabrication. Additional work required of graduate students.

## DES 342 - Computer Generated Fabrication

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: DES 642

Introduction to computer generation construction techniques for design fabrication. Additional work required of graduate students.

## DES 352 - Environmental Design Directed Research

School of Art and Design
3-6 credit(s) At least 1x fall or spring
Crosslisted with: EDI 352
Research for the design of interior environments: lighting, technology, furniture, materials, special populations, ergonomics, environmental and future needs.
Repeatable 1 time(s), 6 credits maximum

## DES 380 - International Course

School of Art and Design
1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## DES 452 - Branding and Marketing Works

## School of Art and Design

3 credit(s) At least 1x fall or spring Double Numbered with: DES 652 Interdisciplinary design studio focused on branding and marketing. Additional work required of graduate students.

## DES 480 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## DES 481 - Design for Production I

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Examine how to develop and grow ideas to create a viable design product. Explore the necessary steps to make a design suitable for production.

## DES 482 - Design for Production II

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Examine how to take designs and create prototypes. Explore branding of design products
and necessary steps to make a product feasible. PREREQ: DES 481

## DES 485 - Multidisciplinary Design Studio

## School of Art and Design

3 credit(s) At least 1 x fall or spring
Project oriented design studio for design majors admitted to the London design semester. Offered only in London.

## DES 561 - Furniture and Light

 Workshop
## School of Art and Design

3 credit(s) At least 1x fall or spring Design and development of experimental furniture and light fixtures. Experiences in prototype construction and industrial production methods.

## DES 562 - Advanced Detailing and Construction

School of Art and Design
3 credit(s) At least $1 x$ fall or spring Crosslisted with: ISD 654
Advance detailing and construction techniques, documentation, shop drawings, computer-aided construction methods for fabrication.

## Drawing

## DRW 113 - Foundation Drawing

School of Art and Design
3 credit(s) Every semester
Crosslisted with: FND 113
Drawing as a form of investigation of the visual world. Emphasizing process over product.

## DRW 114 - Special Topics in

 Foundation DrawingSchool of Art and Design
3 credit(s) Every semester
Crosslisted with: FND 114
Selected areas of and approaches to drawing.

## DRW 203 - Painting and Drawing for Non-Art Majors

School of Art and Design
1-3 credit(s) Every semester
Crosslisted with: PTG 203
Fundamental concepts for techniques of painting and drawing. Open to non-art students only. May not be used for credit toward B.F.A. except by petition to Department of Studio Arts.

[^19]Fundamental concepts for techniques of painting and drawing. Open to non-art students only. May not be used for credit toward B.F.A. except by petition to Department of Studio Arts.

## DRW 245 - Figure Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: PTG 255
Human figure as subject and tool for drawing ideas. Figure composition, historical significance, drawing media.
PREREQ: FND 113 OR FND 114 OR DRW 113 OR DRW 114

## DRW 246 - Figure Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: PTG 256
Human figure as subject and tool for drawing ideas. Figure composition, historical significance, drawing media.
PREREQ: FND 113 OR FND 114 OR DRW 113 OR DRW 114

## DRW 251 - Printmaking: Introductory Intaglio

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: PRT 251
Etching, drypoint, aquatint, and a variety of experimental approaches to plate making and printing. Experience in drawing and twodimensional problem solving.

## DRW 253 - Printmaking: Introductory Lithography

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Crosslisted with: PRT 253
Basic technical processes of stone lithography, drawing to editioning. All aspects of direct drawing and transfer methods, etching, and printing processes. Experience in drawing and twodimensional problem solving.

## DRW 255 - Printmaking: Introductory Serigraphy

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: PRT 255
Papercut stencil, handcut stencil, photographic kodalith and film-positive photo stencil, various experimental techniques, and ink formulas. Drawing and two-dimensional problem solving.

## DRW 257 - Printmaking: Introductory Relief

School of Art and Design
3 credit(s) At least $1 x$ fall or spring

Crosslisted with: PRT 257
Investigation of the process. Cutting and printing the raised surface of various materials, including wood, linoleum, plaster, masonite, and boxwood. Experience in drawing and two-dimensional problem solving.

## DRW 351 - Printmaking, Intermediate Workshop

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: PRT 351
Individual development in one or more printing processes: relief, intaglio, lithography, silk screen. Problem solving through drawing and development of imagery.

## DRW 352 - Printmaking, Intermediate Workshop

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: PRT 352
Individual development in one or more printing processes: relief, intaglio, lithography, silk screen. Problem solving through drawing and development of imagery.

## DRW 353 - Anatomy

School of Art and Design
3 credit(s) Irregularly
Crosslisted with: PTG 353
The skeleton, construction of the human body, and interpretation in drawing.
PREREQ: FND 113 OR FND 114 OR DRW 113 OR DRW 114

## DRW 354 - Anatomy

## School of Art and Design

3 credit(s) Irregularly
Crosslisted with: PTG 354
The skeleton, construction of the human body, and interpretation in drawing.
PREREQ: FND 113 OR FND 114 OR DRW 113 OR DRW 114

## DRW 355 - Intermediate Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: PTG 355
Continuing development of critical awareness through exploration of ideas and media.
Components of pictorial structure and expression. PREREQ: PTG 255 AND PTG 256

## DRW 356 - Intermediate Drawing

School of Art and Design
2-3 credit(s) Every semester
Crosslisted with: PTG 356
Continuing development of critical awareness through exploration of ideas and media.

Components of pictorial structure and expression.
PREREQ: PTG 255 AND PTG 256

## DRW 451 - Printmaking: Advanced Workshop

School of Art and Design
3 credit(s) At least 1x fall or spring Crosslisted with: PRT 451 Individual research. One or more processes, emphasizing color printing and integration of advanced printmaking methods and materials. Resolution of concept and imagery through drawing and problem-solving skills.

## DRW 452 - Printmaking: Advanced Workshop

School of Art and Design
3 credit(s) At least 1x fall or spring Crosslisted with: PRT 452 Individual research. One or more processes, emphasizing color printing and integration of advanced printmaking methods and materials. Resolution of concept and imagery through drawing and problem-solving skills.

## DRW 455 - Advanced Drawing

## School of Art and Design

2-3 credit(s) At least $1 x$ fall or spring Crosslisted with: PTG 455
Historical awareness. Relation of drawing to major areas of study. Philosophical development in the use of personal imagery and techniques.
PREREQ: PTG 355 AND PTG 356

## DRW 456 - Advanced Drawing

School of Art and Design
2-3 credit(s) At least $1 x$ fall or spring Crosslisted with: PTG 456
Historical awareness. Relation of drawing to major areas of study. Philosophical development in the use of personal imagery and techniques.
PREREQ: PTG 355 AND PTG 356

## DRW 503 - Drawing and Painting for Non-Art Majors

School of Art and Design
1-3 credit(s) Every semester
Crosslisted with: PTG 503
Fundamental concepts and techniques of painting and drawing.

DRW 504 - Drawing and Painting for Non-Art Majors

## School of Art and Design

1-3 credit(s) Every semester
Crosslisted with: PTG 504
Fundamental concepts and techniques of painting and drawing.

## DRW 555 - Drawing Research

## School of Art and Design

1-6 credit(s) Every semester
Crosslisted with: PTG 555
Drawing as an expression and creative art form.
PREREQ: PTG 455 AND PTG 456

## Environmental Design

## EDI 100 - Selected Topics

## School of Art and Design

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EDI 104 - Fundamentals of Environmental + Interior Design

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Crosslisted with: DES 146
Design relationships and coordinates as determinates of functional, structural, and aesthetic qualities of interior environments; the physical/cultural context and method for translating programmatic requirements into threedimensional design decisions. Overview and application of elements and principles of design. PREREQ: DES 101 AND DES 102
COREQ: DES 103 AND DES 281

## EDI 143 - Visual Presentation and Drawing for Designers

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Crosslisted with: DES 143
Drawing techniques in freehand sketching and rendered presentations for design practice. Problems in quick techniques and various media.

## EDI 144 - Drafting for Designers

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: DES 144
Orthographic Drawing techniques and practices for designing.

## EDI 145 - Introductory Environmental Design I

## School of Art and Design

3 credit(s) At least 1x fall or spring Crosslisted with: DES 145
Concepts used in decision making and tools necessary for translating these concepts into visual statements.

## EDI 205-Computer Applications in EDI, Level I

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Computer instruction for interior design emphasizing computer-aided drafting and solid modeling for interior application.

## EDI 247 - Fundamentals of Interior Design

## School of Art and Design

3 credit(s) At least 1 x fall or spring
Theoretical and technical knowledge of basic principles of interior design. Overview of space planning, material applications, color, aesthetics, code and sustainable practice in relation to the interior. For non majors.

## EDI 251 - Environmental Design I

## School of Art and Design

3 credit(s) At least 1x fall or spring
Basic concepts and construction methods for small scale environments. Individual and group needs in relation to personal, family, and institutional spaces
PREREQ: FND 115 OR FND 117 OR EDI 146 OR DES 146
COREQ: EDI 253

## EDI 252 - Environmental Design II

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: DES 252
Medium-scale space planning, tenant development, interior design, and documentation for the humane work environment and public spaces. Corporate structure, sustainability, materials, lighting, and construction methods. PREREQ: EDI 251
COREQ: EDI 254

## EDI 253 - Design Presentation and Techniques I

## School of Art and Design

3 credit(s) At least 1x fall or spring Presentation techniques using various media, hand and computer generated for design development, presentation, and construction. PREREQ: EDI 144 OR FND 113 COREQ: EDI 251

## EDI 254 - Design Presentation and Techniques II

## School of Art and Design

3 credit(s) At least 1x fall or spring
Advanced presentation techniques using various media; hand and computer generated for design development.
PREREQ: EDI 253

COREQ: EDI 252 OR DES 252

## EDI 300 - Selected Topics

School of Art and Design
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EDI 305 - Computer Applications, Level II

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: ISD 305
Instruction in the use and application of CADD
(Computer Aided Design and Drafting). Emphasis
given to architectural drafting, space planning and two- and three-dimensional representation.

## EDI 326 - Italian Design Tradition:

Room, House, City
School of Art and Design
3 credit(s) Irregularly
Room, house, city as products of a cultural heritage that offers historical, social, artistic, and spatial meaning. Offered in Florence, Italy.

## EDI 327 - Room, House, City: Studio

School of Art and Design
3 credit(s) Irregularly
Interior room becomes, simultaneously, starting point and result of design compositions of EDI 326. Offered in Florence, Italy.

## EDI 341 - Building and Construction

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Introduction to building materials and construction techniques for wood-frame, steelframe, and masonry structures. How buildings stand up, building codes, working drawings, and site-planning process.

## EDI 346 - American Traditions

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: ISD 346
Historic developments in America as they related to housing and commercial design. Historic preservation laws and codes, barrier-free design, and adaptive reuse considerations.

## EDI 347 - Historic Buildings: Studio

School of Art and Design
3 credit(s)
Crosslisted with: ISD 347
Projects in historic preservation and adaptive use.

## EDI 348 - Introduction to Lighting Design

## School of Art and Design

3 credit(s) At least 1x fall or spring Crosslisted with: ISD 348
Theory and application of lighting as design tool for use in interior and exterior situations. Technical material and communication required for design; contract and specified documents.

## EDI 351 - Environmental Design III

## School of Art and Design

3 credit(s) At least 1x fall or spring Design of large public use environments.
Application of codes, material specifications, space planning, construction methods, lighting design and sustainable design practices for use in interior and exterior situations.
PREREQ: EDI 252 OR DES 252
COREQ: EDI 353

## EDI 352 - Environmental Design Directed Research

## School of Art and Design

3-6 credit(s) At least $1 x$ fall or spring
Crosslisted with: DES 352
Research for the design of interior environments:
lighting, technology, furniture, materials, special populations, ergonomics, environmental and future needs.
PREREQ: EDI 351
Repeatable 1 time(s), 6 credits maximum

## EDI 353 - Environmental Factors

School of Art and Design
3 credit(s) At least $1 x$ fall or spring Basic structural theory, building processes, systems, materials, and code requirements for the design of sustainable construction and remodeling.
PREREQ: (EDI 252 OR DES 252) AND EDI 254 COREQ: EDI 351

## EDI 354 - Professional Practice for Designers

## School of Art and Design

3 credit(s) At least 1x fall or spring
Organizational and management skills for designers. Client and trade relations, marketing, design fees and contracts, accounting methods. Professional ethics and designer responsibility.

## EDI 380 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic
department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## EDI 400 - Selected Topics

## School of Art and Design

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## EDI 451 - Environmental Design Focus Studio

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Focus on a specific category of environmental design: residential, commercial, hospitality, institutional, retail, and health care for the purpose of development of expertise in focus area.
PREREQ: EDI 351 AND EDI 353
COREQ: EDI 453

## EDI 452 - Environmental Design Thesis Studio

School of Art and Design
3 credit(s) At least $1 x$ fall or spring Design development and presentation of thesis project.
PREREQ: EDI 451 AND EDI 453
COREQ: EDI 454

## EDI 453 - Thesis Prep and Research

## School of Art and Design

3 credit(s)
Research in relation to the design of the interior environment focused on the development of thesis proposal and programming.
PREREQ: EDI 351 AND EDI 353
COREQ: EDI 451

## EDI 454 - Environmental Design

 Portfolio
## School of Art and Design

3 credit(s) At least 1 x fall or spring Development of professional portfolio, selfbranding, interviewing techniques. PREREQ: EDI 451 AND EDI 453 COREQ: EDI 452

## EDI 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Fashion Design

## FAS 104 - Fundamentals of Fashion Design

## School of Art and Design

3 credit(s) At least 1x fall or spring Fundamental principles of fashion design, introducing fashion design processes, exploration of media and production techniques.
PREREQ: DES 101 AND 103
COREQ: DES 102

## FAS 120 - Fashion Skills and Techniques I

## School of Art and Design

3 credit(s) At least 1x fall or spring Introduction to garment construction, assembly methods, and finishing techniques commonly used in the fashion industry.

## FAS 121 - Fashion Skills and Techniques II

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring In-depth analysis of garment construction techniques used in ready-to-wear industry. PREREQ: FAS 120

## FAS 147 - Visual Thinking

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Training in productive thinking, developing visual perception, and translating finished thoughts into visible models as aids in the process of solving design problems.

## FAS 155 - Introduction to the Visual

 Arts
## School of Art and Design

3 credit(s) Every semester Analysis and appreciation of design. Twodimensional design problem solving, criticism, and vocabulary.

FAS 222 - Fashion Skills and Techniques III

## School of Art and Design

3 credit(s) At least 1x fall or spring Introduction to the use and application of pattern making (including body forms and measurement) as a critical phase in the design development process.
PREREQ: FAS 121

## FAS 223 - Fashion Skills and Techniques IV

School of Art and Design
3 credit(s) At least $1 x$ fall or spring Interpretation of advanced design concepts, using pattern making and elementary draping together as a system in the creation of shape and volume
in garments.
PREREQ: FAS 222

## FAS 231 - Fashion Design Studio I

## School of Art and Design

3 credit(s) At least 1x fall or spring
Exploration and conceptual development of design ideas through the development of drawings of the stylized figure; fashion details; fabrics and textures; fashion techniques and skills.
PREREQ: FAS 121

## FAS 232 - Fashion Design Studio II

## School of Art and Design

3 credit(s) At least 1x fall or spring Advanced exploration and conceptual development of design ideas through the development of drawings of the stylized figure; fashion details; fabrics and textures; fashion techniques and skills.
PREREQ: FAS 231

## FAS 270 - Experience Credit

## School of Art and Design

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## FAS 300 - Selected Topics

## School of Art and Design

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## FAS 301 - Digital Presentation for Fashion Design

## School of Art and Design

3 credit(s) Every semester
This course explores digital presentation media for fashion design. Students will create fashion, mood/inspiration, illustrations, flats and complete design presentations while exploring the vast selection of tools and methods within these media.

## FAS 322 - Fashion Design: Tailoring

## School of Art and Design

3 credit(s) Irregularly
Materials, designs, and construction techniques in tailoring garments. Materials in relation to design, style trends, and presentation.
PREREQ: FAS 223 AND FAS 232

## FAS 323 - Fashion Design: Accessory Design

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Fundamentals of fashion accessory design.
Concepts and execution of original designs in a variety of fashion accessories, such as hats, handbags, belts, gloves.
PREREQ: FAS 223 AND FAS 232

## FAS 332 - Fashion Design Studio III

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Advanced exploration and conceptual development of design ideas that integrate and contribute to the mastery of a variety of fashion techniques and skills including drawing, draping, flat pattern, garment construction, and tailoring. PREREQ: FAS 223 AND FAS 232

## FAS 333 - Fashion Design Studio IV

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Continued advanced exploration and conceptual development of design ideas that integrate and contribute to the mastery of a variety of fashion techniques and skills including drawing, draping, flat pattern, garment construction, and tailoring. PREREQ: FAS 332

FAS 335 - History of Fashion Design I: Origins and Revivals

## School of Art and Design

3 credit(s) Irregularly
History of fashion design from ancient times to the eighteenth century. Recurrence of historic details in modern designs. Background in art history recommended.

## FAS 336 - History of Fashion Design II: Contemporary Trends

## School of Art and Design

3 credit(s) Every semester
Fashion design since the Industrial Revolution. Factors that influenced fashion design in the eighteenth, nineteenth, and twentieth centuries. Background in art history recommended.

## FAS 341 - Fashion Computer Aided Pattern Design

School of Art and Design
3 credit(s)
Through use of industry-specific software, students develop competence in the basics of computer-aided apparel patternmaking.

## FAS 419 - Contemporary Issues in Fashion

## School of Art and Design

3 credit(s) At least 1x fall or spring Considerations of fashion design in relationship with current issues such as sustainability, technology, economics, trends, health, aging, etc.

## FAS 422 - Fashion Design: Senior Collection I

School of Art and Design
3 credit(s) At least 1x fall or spring
Creating and executing original designs by the two- and three-dimensional methods. Advanced studies and research in relationships of fabric, specific design, design category, style trend, and artistic innovation.
PREREQ: FAS 332 AND (FAS 322 OR FAS 323)

## FAS 423 - Fashion Design: Senior Collection II

## School of Art and Design

3 credit(s) At least 1x fall or spring Creating and executing original designs by the two- and three-dimensional methods in a simulated atelier environment for maximum applications of acquired design skills. PREREQ: FAS 422

## FAS 428 - Social and Psychological Factors Influencing Clothing <br> School of Art and Design

3 credit(s) Irregularly
Application of social science concepts to the understanding of clothing over the life cycle.

## FAS 470 - Experience Credit

## School of Art and Design

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## FAS 490 - Independent Study

## School of Art and Design

1-6 credit(s) Every semester
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## FAS 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under
the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## FAS 526 - Cultural Aspects of Clothing

## School of Art and Design

3 credit(s) Irregularly
Global cultures; how dress and adornment enhance understanding of these cultures.

## FAS 530 - Problems in Environmental Arts

## School of Art and Design

3 credit(s) Irregularly
Research in design, color, historic backgrounds applied to costume. Permission of Instructor. Repeatable

## Film

## FIL 122 - Sound/Image

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Development of the student's understanding and approach to the critical and practical challenges of working creatively with image and sound.

## FIL 221 - Cinematic Modes of Production

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Introduction to the various codes and forms that work at the mainstream and borders of cinematic production, such as documentary, experimental, animation, and fictional narrative, and the techniques of 16 mm filmmaking.
PREREQ: FIL 122

## FIL 222 - Post-Production Workshop

## School of Art and Design

3 credit(s) Irregularly
Introduction to various means of organizing and manipulating images and sound by both analogue and non-linear means.
PREREQ: FIL 221

## FIL 223 - Filmmaking: Storytelling Production

## School of Art and Design

3 credit(s) At least 1x fall or spring
Exploration of cinematic storytelling through the production of a short 16 mm narrative film. PREREQ: FIL 221

## FIL 225 - Problems of Film Perception

## School of Art and Design

3 credit(s) At least 1x fall or spring
A survey of major ideas of visual and audio perception. These ideas will be related to semiotic systems and how filmic meaning is encoded and
decoded and/or recorded by the spectator. PREREQ: ART 253

## FIL 226 - Survey of Film Theory

## School of Art and Design

3 credit(s) At least 1x fall or spring
Readings in classical film theory and criticism and critical works discussed in relation to film screening.
PREREQ: ART 253

## FIL 228 - Film Scriptwriting

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Introductory course to the basic elements of film scripting: dramatic fundamentals, screenplay format, narrative strategies, character creation, and dialogue development.
COREQ: FIL 221

## FIL 321 - Filmmaking: Animation

## School of Art and Design

3 credit(s) Every semester
Laboratory in cel, object animation, and titling preparation, and execution. Special effects. Mattes. Rotoscoping. Bipack techniques.

## FIL 322 - Cinematic Modes Workshop

## School of Art and Design

3 credit(s) Every semester
Advanced exploration of cinematic modes through the creation of short film(s) and critical evaluation of the process. A 16 mm release print is required upon completion of this course.
PREREQ: FIL 223

## FIL 324 - Scriptwriting Workshop

## School of Art and Design

3 credit(s) At least 1 x fall or spring Offers students further opportunity to develop scriptwriting skills. Special attention on story, character development, and narrative strategies. A portfolio-quality script for a feature-length film or for the senior project will be written.
PREREQ: FIL 228

## FIL 329 - Sound Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Principles of sound and acoustics as related to recording audio for film with equal treatment given to film sound design theory and practice in both analogue and digital forms of production assemblage and editing.
PREREQ: FIL 223
Repeatable 2 time(s), 9 credits maximum

## FIL 360 - Topics in Film Culture

School of Art and Design
$1-3$ credit(s) At least $1 x$ fall or spring

Interaction between film and society. Specific issues, such as genre, auteur, ideology, spectatorship, and technology. Repeatable

## FIL 420 - Filmmaking: Senior Project

School of Art and Design
3 credit(s) Every semester
Year-long production of a film demonstrating technical and artistic skills acquired in the film program. An accepted proposal required. PREREQ: FIL 223 OR FIL 322
Repeatable 1 time(s), 6 credits maximum

## FIL 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## FIL 521 - Filmmaking: Selected Topics

## School of Art and Design

3 credit(s) At least 1x fall or spring
Modes of filmmaking such as experimental, narrative, expository; or technical areas such as cinematography, lighting, or art design.
PREREQ: FIL 223
Repeatable 2 time(s), 9 credits maximum

## FIL 523 - Cinema Acting \& Directing

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Exercises in filming fictional dramatic scripts.
Required of B.F.A. acting students and all film drama directors.
PREREQ: FIL 223 AND DRA 105 AND DRA 305

## FIL 527 - Critical Problems Film \& Video

School of Art and Design
3 credit(s) Irregularly
Methods of film and video criticism. The place of the author, the text, the spectator, and the ideological underpinnings of aesthetic value in the critical process.
PREREQ: FIL 225 AND FIL 226

## Foundation

FND 101 - Beginning Drawing for Nonmajors

## School of Art and Design

3 credit(s) Irregularly
Developing the student's proficiency in understanding the basic elements of drawing. In addition, basic one- and two-point perspective will be taught.

## FND 102 - Beginning Figure Drawing for Non-majors

## School of Art and Design

3 credit(s) Irregularly
Developing the student's proficiency in understanding the basic elements of figure drawing.

## FND 103 - Basic Design I

School of Art and Design
2-3 credit(s) Irregularly
Elements of design and their use in two- and three-dimensional studies.

## FND 104 - Basic Design II

## School of Art and Design

2-3 credit(s) Irregularly
Elements of design and their use in two- and three-dimensional studies.

## FND 105-General Drawing I

School of Art and Design
2-3 credit(s) Irregularly
Drawing in a variety of media to develop accurate observation and an understanding of form.

## FND 106 - General Drawing II

## School of Art and Design

2-3 credit(s) Irregularly
Drawing in a variety of media to develop accurate observation and an understanding of form.

## FND 107 - Figure Drawing 1

## School of Art and Design

2-3 credit(s) Irregularly
Drawing from the nude and costumed figure for understanding of action, proportion, and anatomical construction.

## FND 108 - Figure Drawing II

## School of Art and Design

2-3 credit(s) Irregularly
Drawing from the nude and costumed figure for understanding of action, proportion, and anatomical construction.

## FND 111 - Time Arts

## School of Art and Design

3 credit(s)
Art forms that involve the element of time.
Students will investigate processes, conduct research, and develop critical thinking abilities in order to create projects in four dimensions.

## FND 112 - Special Topics in Time Arts

## School of Art and Design

3 credit(s)
Studio course providing opportunity to explore
selected topics in art forms involving time. Repeatable 1 time(s), 9 credits maximum

## FND 113 - Foundation Drawing

## School of Art and Design

3 credit(s) Every semester
Crosslisted with: DRW 113
Drawing as a form of investigation of the visual world. Emphasizing process over product.

## FND 114 - Special Topics in Foundation

 DrawingSchool of Art and Design
3 credit(s) Every semester
Crosslisted with: DRW 114
Selected areas of and approaches to drawing.

## FND 115 - Two-Dimensional Creative Processes

## School of Art and Design

3 credit(s) Every semester
Basic two-dimensional skills with an in-depth series of processes emphasizing the development of ideas through the use of various materials, techniques, and conceptual processes, developing a visual vocabulary, and critical thinking.

## FND 116 - Special Topics in TwoDimensional Creative Processes

## School of Art and Design

3 credit(s) Every semester
Studio course based on selected areas of twodimensional processes.
Repeatable

## FND 117 - Dimensional Arts

## School of Art and Design

3 credit(s) Every semester Introduction to a broad range of thought and material processes relevant to the understanding, organization, invention, and creation of threedimensional objects and the transformation of space.

## FND 118 - Special Topics in ThreeDimensional Arts

## School of Art and Design

3 credit(s) Every semester
Studio course based on selected areas of dimensional arts.
Repeatable

## FND 120 - Time Arts Teaching Assistant Course

## School of Art and Design

3 credit(s)
Teaching and leadership experience in the classroom. Students will work closely with faculty to learn to teach and to develop as artists and
role models. This course links first-year and upperlevel students in the classroom.
PREREQ: FND 111
Repeatable 1 time(s), 6 credits maximum

## FND 200 - Selected Topics

School of Art and Design
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## Fashion Illustration

## FSH 271 - Fashion Illustr Basic Skills

## School of Art and Design

3 credit(s) Upon sufficient interest
Skills to produce sketches of live model. Techniques required for fashion illustration media reproduction.

## FSH 272 - Fashion Illustr Various Media

## School of Art and Design

3 credit(s) Upon sufficient interest Drawing the fashion model. Various media: black-and-white, color. Fashion trends, garment construction, fabrics, and texture.

## FSH 371 - Intermediate Fashion Illustrat

## School of Art and Design

3 credit(s) Upon sufficient interest Drawing the fashion model. Figure composition and layout. The male fashion figure. Second semester: current trends in fashion. Drawing the model. Developing a personal mode or style. PREREQ: FSH 272

## FSH 372 - Intermediate Fashion

## Illustrat

School of Art and Design
3 credit(s) Upon sufficient interest Drawing the fashion model. Figure composition and layout. The male fashion figure. Second semester: current trends in fashion. Drawing the model. Developing a personal mode or style. PREREQ: FSH 371

## FSH 471 - Advanced Fashion

Illustration

## School of Art and Design

3 credit(s) Upon sufficient interest Drawing the fashion model. Various styles for editorial, advertising, designer, and exhibition sketches. Second semester: portfolio preparation. PREREQ: FSH 372

## FSH 472 - Advanced Fashion Illustration

## School of Art and Design

3 credit(s) Upon sufficient interest
Drawing the fashion model. Various styles for editorial, advertising, designer, and exhibition sketches. Second semester: portfolio preparation. PREREQ: FSH 471

## FSH 570 - Fashn Illustratn Res Prob

## School of Art and Design

3 credit(s) Upon sufficient interest Individual development in specialized areas of fashion illustration.
PREREQ: FSH 471

## Illustration

## ILL 261 - Introduction to Illustration

## School of Art and Design

3 credit(s) At least 1x fall or spring Survey of American illustration integrated with studio assignments for developing perceptual and conceptual literacy. Second semester: visual interpretation of manuscripts in various media. Camera as a research tool.

## ILL 262 - Introduction to Illustration

## School of Art and Design

3 credit(s) At least 1x fall or spring
Survey of American illustration integrated with studio assignments for developing perceptual and conceptual literacy. Second semester: visual interpretation of manuscripts in various media. Camera as a research tool.

## ILL 265 - History of Illustration

School of Art and Design
3 credit(s)
The history of American illustration since the mid 1800s to present. Impact on and reflection of American history in both cultural and visual forms.

## ILL 273 - Drawing for Illustration

## School of Art and Design

3 credit(s) At least 1x fall or spring Exploration of traditional and contemporary approaches to drawing for illustrators and designers including comprehensive sketches and storyboards. Proportion and draped figure drawing emphasized.

## ILL 274 - Sequential Illustration

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Study of costumed figures in age, cultural, and historic variations as applicable to illustration. Emphasis on character and visual development for animation, storyboards, graphic novels,
children's books, and time-based media.

## ILL 281 - Illustration Symposium

School of Art and Design
1 credit(s) Every semester
Visiting professionals from various disciplines in illustration discuss their work and career opportunities.
Repeatable 2 time(s), 3 credits maximum

## ILL 283 - Media Arts

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Introduction to materials, techniques, equipment, and processes used by designers and illustrators.

## ILL 284 - Media Arts Techniques

## School of Art and Design

3 credit(s) At least 1x fall or spring Illustration skills and techniques. Practical application of color. Exploration of threedimensional communication.

## ILL 361 - Intermediate Illustration

## School of Art and Design

3 credit(s) At least 1x fall or spring Visual interpretation of reproduction, development of conceptual elements, composition, and color. PREREQ: ILL 261 AND ILL 283

## ILL 362 - Illustration Principles

## School of Art and Design

3 credit(s) At least 1x fall or spring Principles of visual communication: choice of subject, procedures, and the practice of illustration. Studio class assignments. PREREQ: ILL 261 AND ILL 262

## ILL 363 - Illustration Research Problems

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Design and development of graphic projects. Information gathering methods using photography, library, and archival research.
PREREQ: ILL 261 AND ILL 262

## ILL 364 - Illustration Research Problems

## School of Art and Design

3 credit(s) At least 1 x fall or spring Design and development of graphic projects. Information gathering methods using photography, library, and archival research.
PREREQ: ILL 261 AND ILL 262

## ILL 365 - Electronic Illustration

School of Art and Design
3 credit(s) Every semester

Double Numbered with: ILL 565
Exploration of contemporary aspects of computer applications to visual problem solving in electronic, film, and print communications as they apply to the field of illustration.

## ILL 461 - Senior Portfolio

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Assignments with professional restrictions focused on developing a well-rounded portfolio geared toward a specific market
PREREQ: ILL 361 AND ILL 362

## ILL 462 - Senior Portfolio

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Assignments with professional restrictions focused on developing a well-rounded portfolio geared toward a specific market
PREREQ: ILL 361 AND ILL 362

## ILL 483 - The Business of Freelance Illustration

## School of Art and Design

3 credit(s) Every semester Presentation, marketing, and promotion for the professional illustrator. Pricing, contracts, copyright laws, and other professional issues.

## ILL 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## ILL 561 - Illustration Concept

School of Art and Design
3 credit(s) At least 1x fall or spring
Visiting faculty. The creative process, working procedures from concept to finish, and relationship between illustrator and client. Studio assignments.

## ILL 562 - Illustration Concept

School of Art and Design
3 credit(s) At least 1 x fall or spring
Visiting faculty. The creative process, working procedures from concept to finish, and relationship between illustrator and client. Studio assignments.

## ILL 565 - Electronic Illustration

School of Art and Design
3 credit(s) Every semester
Double Numbered with: ILL 365
Exploration of contemporary aspects of computer
applications to visual problem solving in
electronic, film, and print communications as they
apply to the field of illustration.

## Industrial Design

## IND 104 - Fundamentals of Industrial \& Interaction Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Application of iterative design process in response to problem definition, production constraints and prototyping techniques. Discussion of social and environmental responsibilities within Industrial \& Interaction Design professions.
PREREQ: DES 101 AND 103
COREQ: DES 102

## IND 204 - Industrial Design: Technical Graphics

## School of Art and Design

3 credit(s) At least 1x fall or spring True-scale perspective systems, orthographic projections, board skills, and presentation techniques.

## IND 271 - Principles of Industrial Design I

## School of Art and Design

3 credit(s) At least 1x fall or spring
Theoretical and technical elements, principles, and methodology. Development of the intellectual base, philosophical attitude, and manipulative skills that permit innovative solutions to product design problems.
COREQ: IND 273

## IND 272 - Principles of Industrial Design II

## School of Art and Design

3 credit(s) At least 1x fall or spring Basic design problems incorporating mechanical and electrical power systems, production constraints, and simple hand-to-product humanfactor considerations.
PREREQ: IND 271 AND IND 273
COREQ: IND 274 AND IND 276

## IND 273 - Principles of Industrial Form I

## School of Art and Design

3 credit(s) At least 1x fall or spring
Generation of planer and geometric form
as related to materials, tools, and machine processes.
COREQ: IND 271

## IND 274 - Principles of Industrial Form II

School of Art and Design
3 credit(s) At least $1 x$ fall or spring

Analysis and generation of additive, subtractive, and deformative curvilinear form as related to materials, tools, and machine processes. PREREQ: IND 271 AND IND 273 COREQ: IND 272 AND IND 276

## IND 276 - Industrial Design: Visualization and Representation

## School of Art and Design

3 credit(s) At least 1 x fall or spring Visualization, object representation, and presentation techniques examining the interaction between traditional drawing and technology as a means to communicate. PREREQ: IND 271 AND IND 273
COREQ: IND 272 AND IND 274

## IND 280 - Intertnational Course

## School of Art and Design

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## IND 373 - Production Processes: Metals

## School of Art and Design

3 credit(s) At least 1 x fall or spring Transforming metal into appropriate product forms by various mass production processes. Relationship of personal sensitivity to the logical formation of metal products. PREREQ: IND 272 AND IND 274 AND IND 276 COREQ: IND 375 AND IND 377

## IND 374 - Production Processes: Plastics

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Transforming plastic material into appropriate product forms by various mass production processes. Relationship of personal sensitivity to logical formation of plastic products.
PREREQ: IND 373 AND IND 375 AND IND 377
COREQ: IND 376 AND IND 378

## IND 375 - Human Factors For Designers

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: IND 673
Human factors, ergonomics, and anthropometric considerations in the human-product-environment relationship.
PREREQ: IND 272 AND IND 274 AND IND 276

COREQ: IND 373 AND IND 377

## IND 376 - Digital Surface Modeling

School of Art and Design
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: IND 676
The use of three-dimensional surface modeling as visual communication. Design exploration and production tools as used to communicate intent to clients, modelers, engineers, and manufacturers.
PREREQ: IND 373 AND IND 375 AND IND 377 COREQ: IND 374 AND IND 378

## IND 377 - Industrial Design: Typography Studio

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Application of two-dimensional principles to the generation of three-dimensional typographic projects. The meaning of a text as it relates to surface structures, objects, image juxtapositions, and formal relationships.
PREREQ: IND 272 AND IND 274 AND IND 276 COREQ: IND 373 AND IND 375

## IND 378 - Symbology and Semiotics in Industrial Design

## School of Art and Design

3 credit(s)
Introduction to semiotic communication theories as they relate to industrial design. Structural representation will be explored in both two and three-dimensional problem solving.
PREREQ: IND 373 AND IND 375 AND IND 377 COREQ: IND 374 AND IND 376

## IND 471 - Multidisciplinary Product Development

## School of Art and Design

3 credit(s) At least 1x fall or spring
Exposure to multidisciplinary design process in which multiple perspectives shape the goals and help determine the final outcome of the development process.
PREREQ: IND 374 AND IND 376 AND IND 378
COREQ: IND 477 AND IND 479

## IND 472 - Industrial Design: Product Systems

## School of Art and Design

3 credit(s) At least 1x fall or spring
Systematic analysis of human tasks and work sequences. Development of design criteria and specialized product environments and work stations. Problem definition and application of criteria to the design of complex products. PREREQ: IND 471 AND IND 477 AND IND 479 COREQ: IND 476

## IND 476 - Industrial Design: Environmental Practicum

## School of Art and Design

3 credit(s) At least 1x fall or spring
Systematic analysis of human spatial and graphic environment. Space analysis and visual communication: exhibit design; industrial, commercial, and public spaces; and products. PREREQ: IND 471 AND IND 477 AND IND 479 COREQ: IND 472

## IND 477 - Industrial Design: Primary and Secondary Research

## School of Art and Design

## 3 credit(s)

Introduction to design based on insights into human behavior, culture, and environment. Students will observe and document interpersonal interaction, environments, and the products people use. Emphasis on identifying specific user needs.
PREREQ: IND 374 AND IND 376 AND IND 378
COREQ: IND 471 AND IND 479

## IND 479 - Industrial Design Interface

## School of Art and Design

3 credit(s) Every semester
Double Numbered with: IND 679
Development of time-based interactions promoting expanding paradigms, better understanding, greater productivity, and ease of use through the use of adaptive interfaces. Additional work required of graduate students. PREREQ: IND 374 AND IND 376 AND IND 378
COREQ: IND 471 AND IND 479

## IND 481 - Ethnography and Culture in Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Project-oriented course introduces students to design solutions based on insights into people's natural behavior, culture, and environment. Requires field research into how people actually live, utilizing documentation and design research methods. Offered only in London for design majors.

## IND 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## IND 571 - Industrial Design: Product Practicum

## School of Art and Design

3 credit(s) At least 1x fall or spring

Developing company-oriented products for domestic, commercial, and industrial markets; associated packaging and displays. Balance between corporate and user needs: materials, production limitations, distribution, and marketing patterns.
PREREQ: IND 471 AND IND 477 AND IND 479
COREQ: IND 573 AND (IND 577 OR IND 578)

## IND 572 - Industrial Design: Advanced Problems

## School of Art and Design

3 credit(s) At least 1x fall or spring Identification and solution of product problems based on industry-wide developments and societal needs. Appropriate and comprehensive solutions sought, developed, and communicated using professional-level techniques.
PREREQ: IND 571 AND IND 573 AND (IND 577 OR IND 578)
COREQ: IND 574

## IND 573 - Industrial Design: Thesis Research

## School of Art and Design

3 credit(s) At least 1x fall or spring
Comprehensive design document showing
both critical and creative thinking. Both written and visual information are stressed in the final product.
PREREQ: IND 471 AND IND 477 AND IND 479
COREQ: IND 571 AND (IND 577 OR IND 578)

## IND 574 - Industrial Design: Thesis

## School of Art and Design

6 credit(s) At least 1x fall or spring
Research, analysis, and solution of a major design problem selected by the student to further his or her professional career.
PREREQ: IND 571 AND IND 573 AND (IND
577 OR IND 578)
COREQ: IND 572

## IND 577 - Industrial Design: Philosophy and Ethics

## School of Art and Design

3 credit(s) At least 1x fall or spring Historical perspective. Contemporary position and responsibilities of the industrial designer in a technological/electronic society. Interplay with associated disciplines.

## IND 578 - Industrial Design: Professional Practices

## School of Art and Design

3 credit(s) At least 1x fall or spring Business organizations, design management and planning. Relations with clients, office organization and management; proposals and contracts, estimating, and elementary accounting. Protection
of designs, patents, copyrights, and trademarks.

## Interior Design

## ISD 205 - Drafting for Designers

School of Art and Design
3 credit(s) At least $1 x$ fall or spring Drafting elements and techniques used to solve three-dimensional designs with definitive drawings that accurately describe information required for manufacture and construction.

## ISD 206 - Materials for Interior Designers

School of Art and Design
3 credit(s) At least 1x fall or spring Materials, components, millwork, lighting, construction systems, and applicable codes for design and documentation of the built environment.
PREREQ: ISD 247 OR 251

## ISD 248 - Interior Design: Introductory

## School of Art and Design

3 credit(s) Irregularly
Theoretical and technical knowledge of basic principles of good design. Analysis of plan, design function, and aesthetics of interior space in relation to individual needs.
PREREQ: FND 247

## ISD 280 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

ISD 305 - Computer Applications, Level II

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 305
Instruction in the use and application of CADD
(Computer Aided Design and Drafting). Emphasis
given to architectural drafting, space planning and two- and three-dimensional representation.
PREREQ: EDI 205 OR ISD 205

## ISD 346 - American Traditions

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 346
Historic developments in America as they related
to housing and commercial design. Historic
preservation laws and codes, barrier-free design, and adaptive reuse considerations.

## ISD 347 - Historic Buildings: Studio

## School of Art and Design

3 credit(s) At least 1x fall or spring Crosslisted with: EDI 347
Projects in historic preservation and adaptive use. PREREQ: EDI 348

## ISD 348 - Introduction to Lighting Design

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: EDI 348
Theory and application of lighting as design tool for use in interior and exterior situations. Technical material and communication required for design; contract and specified documents.
PREREQ: ISD 351

## ISD 352 - Interior Design: Contract

## School of Art and Design

3 credit(s) At least 1x fall or spring
Design of large office complexes, public use interiors, and service/care facilities. Individual activity; group interaction; cross-cultural relationships, requirements for people who are disabled; and health, safety, comfort, and technological factors for contract space design. PREREQ: ISD 351

## ISD 354 - Architectural Systems for Designers

## School of Art and Design

3 credit(s) At least 1x fall or spring Basic structural theory, building processes, systems, materials, and code requirements for the design of new construction and remodeling. Vocabulary of architectural communication. PREREQ: ISD 353 OR EDI 341

## ISD 380 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## ISD 480 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution
and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## ISD 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## ISD 553 - Interior Design: Philosophy and Research

## School of Art and Design

3 credit(s) At least 1x fall or spring
Position of the interior designer in a technological society and relation of design to the humanities, social sciences, and natural/physical sciences. Interaction with disciplines.

## ISD 580 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## Jewelry and Metalsmithing

## JAM 271 - Introduction to Jewelry and Metals

## School of Art and Design

3 credit(s) Every semester
Fundamental techniques and visual design problems as introduction to working with metal, cutting, soldering, forging, finishing, and other surface treatments.

## JAM 272 - Casting

School of Art and Design
3 credit(s) Every semester
Basic casting methods used by the studio jeweler and metalsmith. Includes wax modeling and lost wax, cuttlefish bone, and other casting methods. PREREQ: JAM 271

## JAM 371 - Surface Techniques and Processes

## School of Art and Design

3 credit(s) Even Academic Yr e.g. 2004-5 Surface techniques and processes used to enhance objects made for human use and
adornment. This course builds on the fabrication and casting techniques learned in the introductory level courses.
PREREQ: JAM 272

## JAM 372 - Metal Forming

School of Art and Design
3 credit(s) Even Academic Yr e.g. 2004-5
Jewelry and object design and making, using metal forming techniques and processes. Objects may include vessel forms, containers and small sculptures.
PREREQ: JAM 272

## JAM 373 - Stones and Stonesetting

School of Art and Design
3 credit(s) Odd academic yr e.g. 2007-8 Introduction to gemology as it pertains to jewelry and metalsmithing. Intermediate and advanced level stone settings.
PREREQ: JAM 272

## JAM 374 - Color on Metal

School of Art and Design
3 credit(s) Odd academic yr e.g. 2007-8 Jewelry and metalsmithing techniques and processes used to color the surface of non-ferrous metal objects.
PREREQ: JAM 272

## JAM 375 - Experimental Materials

School of Art and Design
3 credit(s) Even Academic Yr e.g. 2004-5
This course presents alternatives not only to traditional materials of Metalsmithing, but alternatives to how body adornment can be used to express identity in society.
PREREQ: JAM 272

## JAM 400 - Selected Topics <br> School of Art and Design

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## JAM 471 - History of Jewelry and Metalsmithing

School of Art and Design
3 credit(s) Even Academic Yr e.g. 2004-5 Double Numbered with: JAM 671
Study the history of jewelry/metalsmithing from prehistoric to contemporary pieces. Differences and similarities among cultures is discussed.

## JAM 472 - Jewelry Production

School of Art and Design
3 credit(s) Even Academic Yr e.g. 2004-5
The reproduction of jewelry and objects through
systems, moldmaking, and outsourcing. A practice commission experience and discussion of pricing included.
PREREQ: JAM 272

## JAM 473 - Machine Tools and Technology

## School of Art and Design

3 credit(s) Odd academic yr e.g. 2007-8 The use of metal forming, turning, and cutting machines will be presented. Included will be an introduction to metallurgy, toolmaking, and safety issues as they pertain to jewelry and metalsmithing studios.
PREREQ: JAM 272

## JAM 474 - Jewelry and Metalsmithing Contemporary Issues

## School of Art and Design

3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: JAM 674
Reading, research and discussion of the issues that face contemporary studio jewelers, metalsmiths, collectors, curators, critics and the jewelry industry.

## JAM 475 - Senior Portfolio and Exhibition

## School of Art and Design

3 credit(s) At least 1x fall or spring Required of seniors in the jewelry and metalsmithing major. Business practices, research paper, portfolio, professional packet, and exhibition of work.
Repeatable

## JAM 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## Museum Studies

## MUS 405 - Print Curatorship

## School of Art and Design

3 credit(s) Upon sufficient interest Double Numbered with: MUS 705
The origins and development of printmaking media are highlighted. Emphasizing the study of original prints by Durer, Rembrandt, Whistler, Picasso, and Rauschenberg in the University Art Collection. Additional work required of graduate students.

## MUS 407-Collections Management

## School of Art and Design

3 credit(s) At least 1x fall or spring

Double Numbered with: MUS 607
Administration and operation of a museum collection, including registration, cataloging, storage techniques, conservation, insurance, shipping, handling. Computer registration, photographic documentation systems, and other information retrieval systems. Laboratory experience in SU Art Collections. Additional work required of graduate students.

## MUS 408 - Public Learning in Museums

## School of Art and Design

3 credit(s) At least 1x fall or spring
Double Numbered with: MUS 708
Examine the educational role of museums in society. Study contemporary educational theory, audience development, and accessibility issues within the museum context. Additional work required of graduate students.

## MUS 409 - Museum Management

## School of Art and Design

3 credit(s) At least 1x fall or spring
Double Numbered with: MUS 709
Principles of effective leadership; mission, vision, and values; board, staff, executive relationships; civic engagement; assembling workforce; fiscal procedures; budget development. Short and long term goals planning. Direct experience with local museum professionals. Additional work required of graduate students.

## MUS 412 - Museum Development

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: MUS 712
Understanding philanthropy and the fundamentals of successful fundraising, articulating a case for support, building endowment, capital campaigns, special events, planned giving, corporate and foundational support, practicing stewardship, the development profession. Additional work required of graduate students.

## MUS 500 - Selected Topics

School of Art and Design
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MUS 503 - Introduction to Museum Studies

## School of Art and Design

3 credit(s) At least 1x fall or spring The museum's historical development and its role in modern society. Curatorial methodologies, research techniques, professional ethics, and
effective writing. Permission of instructor

## MUS 504 - Administrative Challenge and Change in Museums

School of Art and Design
3 credit(s) Only during the summer Organizational change and current practice will be explored through visits to New York City museums and galleries. Presentations will be given by museum professionals.

## MUS 506 - Introduction to Curatorship

## School of Art and Design

3 credit(s) At least 1x fall or spring Problems and responsibilities of the curator. Care, interpretation, and presentation of objects. Exhibition programming, history of collecting, curatorial ethics. Permission of instructor

## Printmaking

## PRT 251 - Printmaking: Introductory Intaglio

School of Art and Design
3 credit(s) At least 1x fall or spring Crosslisted with: DRW 251
Etching, drypoint, aquatint, and a variety of experimental approaches to plate making and printing. Experience in drawing and twodimensional problem solving.

## PRT 253 - Printmaking: Introductory

 Lithography
## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: DRW 253
Basic technical processes of stone lithography, drawing to editioning. All aspects of direct drawing and transfer methods, etching, and printing processes. Experience in drawing and twodimensional problem solving.

## PRT 255 - Printmaking: Introductory Serigraphy

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: DRW 255
Papercut stencil, handcut stencil, photographic kodalith and film-positive photo stencil, various experimental techniques, and ink formulas.
Drawing and two-dimensional problem solving.

## PRT 257 - Printmaking: Introductory Relief

## School of Art and Design

3 credit(s) At least 1x fall or spring
Crosslisted with: DRW 257
Investigation of the process. Cutting and printing the raised surface of various materials, including
wood, linoleum, plaster, masonite, and boxwood. Experience in drawing and two-dimensional problem solving.

## PRT 351 - Printmaking, Intermediate Workshop

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Crosslisted with: DRW 351
Individual development in one or more printing processes: relief, intaglio, lithography, silk screen. Problem solving through drawing and development of imagery.

## PRT 352 - Printmaking, Intermediate Workshop

## School of Art and Design

3 credit(s) At least 1x fall or spring Crosslisted with: DRW 352
Individual development in one or more printing processes: relief, intaglio, lithography, silk screen. Problem solving through drawing and development of imagery.

## PRT 430 - Senior Portfolio and Research Paper: Printmaking

## School of Art and Design

3 credit(s) Upon sufficient interest
Required of seniors in printmaking. Topics can be historical, critical, or process-related. Senior thesis exhibition required and presented final semester of senior year.

## PRT 451 - Printmaking: Advanced Workshop

## School of Art and Design

3 credit(s) At least 1x fall or spring Crosslisted with: DRW 451
Individual research. One or more processes, emphasizing color printing and integration of advanced printmaking methods and materials. Resolution of concept and imagery through drawing and problem-solving skills.

## PRT 452 - Printmaking: Advanced Workshop

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Crosslisted with: DRW 452
Individual research. One or more processes, emphasizing color printing and integration of advanced printmaking methods and materials. Resolution of concept and imagery through drawing and problem-solving skills.

## PRT 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under
the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## PRT 551 - Hand Papermaking Workshop

## School of Art and Design

3 credit(s) At least 1x fall or spring Basic skills in hand papermaking in twoand three-dimensional form. Student works independently but attends group demonstrations and discussions on scheduled day of class.

## PRT 552 - Hand Paper Print/Book Workshop

## School of Art and Design

3 credit(s) At least 1x fall or spring
Continued investigation in hand papermaking, simple bookbinding, and letterpress printing.

## Painting

## PTG 203 - Painting and Drawing for Non-Art Majors

## School of Art and Design

1-3 credit(s) Every semester
Crosslisted with: DRW 203
Fundamental concepts for techniques of painting and drawing. Open to non-art students only. May not be used for credit toward B.F.A. except by petition to Department of Studio Arts.

## PTG 204 - Painting and Drawing for Non-Art Majors

## School of Art and Design

1-3 credit(s) Every semester
Crosslisted with: DRW 204
Fundamental concepts for techniques of painting and drawing. Open to non-art students only. May not be used for credit toward B.F.A. except by petition to Department of Studio Arts.

## PTG 255 - Figure Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: DRW 245
Human figure as subject and tool for drawing ideas. Figure composition, historical significance, drawing media.
PREREQ: FND 113 OR FND 114

## PTG 256 - Figure Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: DRW 246
Human figure as subject and tool for drawing
ideas. Figure composition, historical significance, drawing media.
PREREQ: FND 113 OR FND 114

## PTG 281 - Introductory Painting

School of Art and Design
2-3 credit(s) At least $1 x$ fall or spring Figurative and nonfigurative painting in oils or acrylics as the basis for study of color and form. Materials and approaches.
PREREQ: FND 113 OR FND 114

## PTG 282 - Introductory Painting

## School of Art and Design

2-3 credit(s) At least $1 x$ fall or spring
Figurative and nonfigurative painting in oils or acrylics as the basis for study of color and form. Materials and approaches.
PREREQ: FND 113 OR FND 114
PTG 283 - Painting, Figure and Portrait
School of Art and Design
2-3 credit(s) Irregularly
Nude and costumed figure study, portrait painting. Painting media.
PREREQ: FND 113 OR FND 114
PTG 284 - Painting, Figure and Portrait
School of Art and Design
2-3 credit(s) Irregularly
Nude and costumed figure study, portrait painting.
Painting media.
PREREQ: FND 113 OR FND 114
PTG 285 - Color and Pictorial Design

## School of Art and Design

3 credit(s) Upon sufficient interest Organization of pictorial ideas and form. Use of various painting media. Color, its perception, function, and application.

## PTG 300 - Selected Topics

## School of Art and Design

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## PTG 353 - Anatomy

School of Art and Design
3 credit(s) Irregularly
Crosslisted with: DRW 353
The skeleton, construction of the human body, and interpretation in drawing.
PREREQ: FND 113 OR FND 114

## PTG 354 - Anatomy

School of Art and Design
3 credit(s) Irregularly
Crosslisted with: DRW 354
The skeleton, construction of the human body, and interpretation in drawing.

## PREREQ: FND 113 OR FND 114

## PTG 355 - Intermediate Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: DRW 355
Continuing development of critical awareness through exploration of ideas and media.
Components of pictorial structure and expression.
PREREQ: PTG 255 OR PTG 256

## PTG 356 - Intermediate Drawing

## School of Art and Design

2-3 credit(s) Every semester
Crosslisted with: DRW 356
Continuing development of critical awareness through exploration of ideas and media. Components of pictorial structure and expression.
PREREQ: PTG 255 OR PTG 256 AND PTG 355

## PTG 357 - Nature Drawing

## School of Art and Design

3 credit(s) Upon sufficient interest
Forms in nature and research in the design of natural forms.
PREREQ: FND 113 OR FND 114

## PTG 358 - Nature Drawing

## School of Art and Design

3 credit(s) Upon sufficient interest
Forms in nature and research in the design of natural forms.
PREREQ: FND 113 OR FND 114

## PTG 381 - Intermediate Painting

## School of Art and Design

3 credit(s) Every semester
Continuation of PTG 281,282. Problems in pictorial organization in oil, acrylics, and related materials. Historical and personal understanding of pictorial intention.
PREREQ: PTG 281 AND PTG 282

## PTG 382 - Intermediate Painting

## School of Art and Design

3 credit(s) Every semester
Continuation of PTG 281,282. Problems in pictorial organization in oil, acrylics, and related materials. Historical and personal understanding of pictorial intention.
PREREQ: PTG 281 AND PTG 282

## PTG 385 - Painting Materials and Techniques

## School of Art and Design

3 credit(s) Irregularly
Pigments, grounds, media, and methods of painting. Lectures and laboratory.

## PTG 387 - Watercolor

School of Art and Design
2-3 credit(s) Every semester
Still life, interior, and landscape painting in watercolor.
PREREQ: FND 113 OR FND 114

## PTG 388 - Watercolor

School of Art and Design
2-3 credit(s) Every semester
Still life, interior, and landscape painting in watercolor.
PREREQ: FND 113 OR FND 114

## PTG 455 - Advanced Drawing

School of Art and Design
2-3 credit(s) At least $1 x$ fall or spring
Crosslisted with: DRW 455
Historical awareness. Relation of drawing to major areas of study. Philosophical development in the use of personal imagery and techniques.
PREREQ: PTG 355 OR PTG 356

## PTG 456 - Advanced Drawing

## School of Art and Design

2-3 credit(s) At least $1 x$ fall or spring Crosslisted with: DRW 456
Historical awareness. Relation of drawing to major areas of study. Philosophical development in the use of personal imagery and techniques.
PREREQ: PTG 355 AND PTG 356

## PTG 481 - Advanced Painting

School of Art and Design
3 credit(s) Every semester
Continued studio development of ideas objectives, self-critical attitude, and approach to painting. PREREQ: PTG 381 AND PTG 382

## PTG 482 - Advanced Painting

## School of Art and Design

3 credit(s) Every semester
Continued studio development of ideas objectives, self-critical attitude, and approach to painting.
PREREQ: PTG 381 AND PTG 382

## PTG 485 - Advanced Pictorial Design

## School of Art and Design

3 credit(s) Irregularly Independent research.
PREREQ: PTG 285

## PTG 487 - Landscape Painting

## School of Art and Design

3 credit(s) Upon sufficient interest
Outdoor painting in oil. Composition problems.
PREREQ: PTG 281 AND PTG 282

## PTG 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## PTG 503 - Drawing and Painting for Non-Art Majors

School of Art and Design
1-3 credit(s) Every semester
Crosslisted with: DRW 503
Fundamental concepts and techniques of painting and drawing.

PTG 504 - Drawing and Painting for Non-Art Majors

School of Art and Design
1-3 credit(s) Every semester
Crosslisted with: DRW 504
Fundamental concepts and techniques of painting and drawing.

## PTG 555 - Drawing Research

## School of Art and Design

1-6 credit(s) Every semester
Crosslisted with: DRW 555
Drawing as an expression and creative art form.
PREREQ: PTG 455 OR PTG 456

## PTG 582 - Painting Research

School of Art and Design
1-6 credit(s) Every semester
Advanced research.
PTG 585 - Painting Materials Techniques

## School of Art and Design

1-3 credit(s) Irregularly
Advanced study in use of studio materials and techniques used by painters; pigments, binders, for oil paint, acrylics, polymer resins, casein, pastels, water color, egg tempera, fresco. Independent research problems are assigned.

## Sculpture

## SCU 207 - Sculpture Survey

School of Art and Design
3 credit(s) Every semester
Mold making, clay modeling; composition
problems in three dimensions with several
sculpture media. For non-art students.

## SCU 208 - Sculpture Survey

School of Art and Design
3 credit(s) Every semester
Mold making, clay modeling; composition
problems in three dimensions with several sculpture media. For non-art students.

## SCU 280 - International Course

## School of Art and Design

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## SCU 295 - Introductory Sculpture

## School of Art and Design

## 2-3 credit(s) Every semester

Mold making, clay modeling; composition problems in three dimensions with several sculpture media.

## SCU 296 - Introductory Sculpture

## School of Art and Design

2-3 credit(s) Every semester
Mold making, clay modeling; composition problems in three dimensions with several sculpture media.

## SCU 300 - Selected Topics

## School of Art and Design

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## SCU 391 - Wood and Mixed-Media Research

## School of Art and Design

1-9 credit(s) Every semester
Double Numbered with: SCU 591
Sculptural uses of wood. Lathe work, lamination, and carving. Combination of wood and other sculptural materials. Individual research in conjunction with course expectations for students taking SCU 591.

## SCU 392 - Plastics Techniques Research

## School of Art and Design

1-9 credit(s) Every semester
Double Numbered with: SCU 592
Plastics and their potential sculptural uses. Vacuum-formed plastic sheet, casting resins, and fiberglass lay-up. Individual research in conjunction with course expectations for students taking SCU 592.

## SCU 395 - Intermediate Sculpture

## School of Art and Design

2-3 credit(s) Every semester
Direct carving in stone and wood. Introduction
to casting. Modeling, advanced composition problems.
PREREQ: SCU 295 AND SCU 296

## SCU 396 - Intermediate Sculpture

## School of Art and Design

2-3 credit(s) Every semester
Direct carving in stone and wood. Introduction to casting. Modeling, advanced composition problems.
PREREQ: SCU 295 AND SCU 296

## SCU 480 - International Course

## School of Art and Design

1-12 credit(s) Every semester
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## SCU 495 - Advanced Sculpture

School of Art and Design
3 credit(s) Every semester
Advanced research.
PREREQ: SCU 395 AND SCU 396

## SCU 496 - Advanced Sculpture

## School of Art and Design

3 credit(s) Every semester
Advanced research.
PREREQ: SCU 395 AND SCU 396

## SCU 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## SCU 507 - Sculpture Survey

## School of Art and Design

1-9 credit(s) Every semester
Modeling from life, casting, composition problems.
PREREQ: SCU 207 AND SCU 208

## SCU 508 - Sculpture Survey

## School of Art and Design

1-9 credit(s) Every semester
Modeling from life, casting, composition problems.
PREREQ: SCU 207 AND SCU 208

## SCU 591 - Wood and Mixed-Media Research

## School of Art and Design

1-9 credit(s) Every semester
Double Numbered with: SCU 391
Sculptural uses of wood. Lathe work, lamination, and carving. Combination of wood and other sculptural materials. Individual research in conjunction with course expectations for students taking SCU 591.

## SCU 592 - Plastics Techniques <br> Research

School of Art and Design
1-9 credit(s) Every semester
Double Numbered with: SCU 392
Plastics and their potential sculptural uses. Vacuum-formed plastic sheet, casting resins, and fiberglass lay-up. Individual research in conjunction with course expectations for students taking SCU 592.

## SCU 596 - Sculpture Research

School of Art and Design
1-9 credit(s) Every semester
Advanced research.
PREREQ: SCU 295 AND SCU 296

## Surface Pattern Design

## SPD 245 - Creative Media and Design Techniques

School of Art and Design
3 credit(s)
Traditional and experimental techniques used to render in a variety of media, including photographic imagery, texturing, faux, and
botanicals for conceptual design studies.

## SPD 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## SPD 527 - Advanced Textile Printing

School of Art and Design
3 credit(s)
Individual research of advanced dyeing and
printing methods.
PREREQ: TXT 314

## Studio Arts

## STA 321 - Flat (Stained) Glass Workshop

## School of Art and Design

3 credit(s) Irregularly
Glass cutting and basic construction skills covered with emphasis on original design. Color theory. Projects include conventional and contemporary methods of flat glass design and construction. Experimentation with traditional and innovative material and fabrication.

## STA 350 - Introduction to Glass Casting, Fusing and Slumping <br> School of Art and Design

3 credit(s) Irregularly
Hot glass course focusing on casting, fusing, and slumping techniques. Materials include a rich palette of sheet glass, frits, stringers, powders, confetti, and cullet. Introduction to design and firing techniques.

## Transmedia

## TRM 151 - TransMedia Colloquium (History)

## School of Art and Design

## 3 credit(s)

Introduction to the history of the media arts, including artists' use of photography, film, video, and digital media, extending into artists' use of television, audio, radio, the web, video games, and mediated performance.

## TRM 152 - TransMedia Colloquium (Theory)

## School of Art and Design

3 credit(s)
Examination of how theory has influenced the way artists use photography, film video, and digital media, extending into artists' use of television, audio, radio, the web, video games, and mediated performance.

## TRM 153 - Studio Concepts

## School of Art and Design

3 credit(s)
Introduces students to thinking critically and practically about time-based creative practices. Explores the use of digital media in concepts surrounding time/space, image/ sound, interactivity/networks, and performance/ movement. Students will work with photo, film, video, and computer.

## TRM 154 - Interconnected Studios

## School of Art and Design

3 credit(s)
The theory of interdisciplinary practices will be the focus of contemporary art making and
intersection of time-based media in animation, interactive technologies, installation, and performance art.

## TRM 251 - Intermediate TransMedia Studio

## School of Art and Design

3 credit(s)
Builds on the basic tools and concepts introduced in TRM 153. Students explore thematic and topical problems in the media arts, while deepening their critical and technical skills. PREREQ: TRM 153 AND TRM 154

## TRM 310 - Literacy, Community and Media

## School of Art and Design

## 3 credit(s)

Double Numbered with: TRM 610
This course brings University students into local public schools to offer instruction in media such as photography and video, along with writing exercises to develop projects that explore issues of identity, community and family.
Repeatable 1 time(s), 6 credits maximum

## TRM 316 - Introduction to Visual Culture

## School of Art and Design

3 credit(s)
Crosslisted with: ART 316, CRS 316
Introduction to critical approaches that illuminate how modes of visual culture function as rhetoric, commerce, art, and ideological expression. Examines how institutional frameworks shape global image circulation.

## TRM 351 - Advanced Tramsedia Studio

## School of Art and Design

## 3 credit(s)

This course will presume a technical ability which allows for more specialized topics of discussion/ study. Students will be required to create projects in collaboration, exploring ideas in depth and understanding historical and critical precedents. PREREQ: TRM 251

## TRM 401 - Physical Computing Research

## School of Art and Design

3 credit(s)
The use of electronics, computers, and fabrication techniques of various materials for constructing interactive artworks that go beyond keyboard/ mouse/screen relationships. Critical theory related to physical computing. PREREQ: CAR 132 AND SCU 295 AND SCU 392

## TRM 451 - TransMedia Synthesis

## School of Art and Design

3 credit(s)
Culmination of the transmedia experience for graduating seniors. Projects are intended to increase the self-awareness of artistic vision, honed from the flexibility and diversity of the transmedia curriculum.
PREREQ: TRM 351

## Textiles

## TXT 211 - Patterns of Repeat

## School of Art and Design

3 credit(s) Every semester
Study man-made and natural patterns and explore methods of creating repeat and engineered patterns for a variety of design applications. Emphasis on importance of theories of human perception relative to visual repetition.

## TXT 221 - Handweaving

School of Art and Design
3 credit(s) Every semester Use of the floor loom for exploration of making many kinds of cloth. Focus on color, pattern, texture, and a variety of interlacements of yarn.

## TXT 290 - Independent Study

## School of Art and Design

1-6 credit(s)
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## TXT 312 - Interior Furnishings

## School of Art and Design

3 credit(s) At least 1 x fall or spring Double Numbered with: TXT 612
Design of decorative patterns for residential and commercial interior environments. Emphasis will be on the psychological effects of pattern and color. Specific repeats, rendering and presentation techniques for furnishing appropriate to end-use market production. Additional work required of graduate students.

## TXT 313 - Dyework Design

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Students explore a variety of dye applications including Batik, other resist techniques such as folding and stitching, and discharge. There is an emphasis on integrated design of cloth and applications, including garments.

## TXT 314 - Textile Handprinting

## School of Art and Design

3 credit(s) At least 1x fall or spring
Double Numbered with: TXT 614
Screen printing repetitive and engineered designs on fabric. Design process, color formulas, and screen preparation. Additional work required of graduate students.

## TXT 315 - Digital Fabric Printing

## School of Art and Design

3 credit(s) At least 1x fall or spring Explores the color, scale and design benefits of digital printing. Student designs become the impetus for learning computer-aided repeat and layout systems of fabric design development for multiple applications.

## TXT 316 - Computer-Aided Pattern Design

## School of Art and Design

3 credit(s) Every semester
Double Numbered with: TXT 616
Digital design for the development of decorative patterns. Motif manipulation, color selection, repeat techniques, and presentation methods. Additional work required of graduate students.

## TXT 322 - Dyeing to Weave

## School of Art and Design

3 credit(s) At least 1 x fall or spring Explore the relationship between dyeing and weaving cloth on the floor loom. Some of the processes include warp-painting, woven shibori and ikat. Natural dyeing with both indigo and other plant materials will be investigated.
Repeatable 1 time(s), 6 credits maximum

## TXT 323 - Experimental Textiles and Materials

## School of Art and Design

3 credit(s) Every semester
Provides students with experiences of material creation, manipulation, and surface techniques. Explores textile production via technology including machine knitting, digital printing and machine embroidery. Other techniques included as applicable.

## TXT 324 - Textiles Synthesis

## School of Art and Design

3 credit(s) Every semester
Double Numbered with: TXT 624
Focus on experimentation with fibers composition utilizing quilting, appliqué, embroidery, beading, lace-making and other processes. Emphasis on compositional balance of color, form, contrast, texture and imagery. Additional work required of graduate students.

## TXT 325 - Interlocking Fibers and Materials

## School of Art and Design

3 credit(s) Every semester
Emphasis on applying techniques to the creation of a pliable plane for a variety of 2-D and 3-D applications. Explorations into traditional and non-traditional materials and processes.
Repeatable 1 time(s), 6 credits maximum

## TXT 326 - Environmental Textiles

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: TXT 626
Focus on processing and manipulation of pliable fibers into three-dimensional forms for wearable or site-specific applications. Students will use various structural supports to create mass and volume. Additional work required of graduate students.

## TXT 327 - Textiles in Context

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: TXT 627
Research textile parameters from the perspective of student's design specializations. Design and fabricate cloth and finished projects for those applications. Emphasis on creative problem solving and investigating qualities of textiles within different mediums. Additional work required of graduate students.
PREREQ: TXT 211 OR TXT 316
Repeatable 1 time(s), 6 credits maximum

## TXT 380 - International Course

## School of Art and Design

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## TXT 400 - Selected Topics

## School of Art and Design

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## TXT 470 - Experience Credit

## School of Art and Design

1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written
or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## TXT 490 - Independent Study

School of Art and Design
1-6 credit(s) Irregularly
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## TXT 537 - Advanced Computer-Aided Pattern Design

School of Art and Design
3 credit(s) At least 1x fall or spring
Individual research of advanced computer-aided design methods.
Repeatable 1 time(s), 6 credits maximum

## Art Video

## VID 211 - Video Sketchbook

School of Art and Design
3 credit(s) At least 1x fall or spring A medium for perceptual and conceptual development. Most work done exclusively with camcorders. Editing equipment and instruction is available for projects requiring post production.

## VID 212 - Intro Art Video

School of Art and Design
3 credit(s) At least 1x fall or spring A medium for making art. Video works by professional artists are studied, readings are required, specific projects are assigned. Production and post-production skills are refined. PREREQ: VID 211

## VID 270 - Experience Credit

## School of Art and Design

1-6 credit(s) Upon sufficient interest Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## VID 280 - International Course

## School of Art and Design

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution
and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.
Repeatable

## VID 310 - Studies in Art Video

## School of Art and Design

3 credit(s) At least $1 x$ fall or spring Relationship with traditional studio arts, music, cinema, television, computers, telecommunications, and networks. Art video recordings are used to focus and structure explorations of the contemporary media environment.
Repeatable

## VID 311 - Intermediate Art Video

## School of Art and Design

3 credit(s) At least 1x fall or spring Use as a medium for making art. Production and post-production skills are refined. Perceptual and conceptual development informed by contemporary art history and theory.

## VID 312 - Intermediate Art Video II

## School of Art and Design

3 credit(s) At least 1x fall or spring Use as a medium for making art. Production and post-production skills are refined. Perceptual and conceptual development informed by contemporary art history and theory.

## VID 313 - Advanced Post-Production Techniques

## School of Art and Design

3 credit(s) At least 1x fall or spring
Double Numbered with: VID 613
A workshop in audio and video post-production techniques. Specific exercises that structure learning in audio/video relationships. Advanced audio/video techniques are explored. Additional work is required of graduate students. VID 613 is required of Art Video M.F.A. students.
PREREQ: VID 212

## VID 411 - Advanced Art Video

## School of Art and Design

3 credit(s) At least 1x fall or spring
Use of video to produce art informed by contemporary art history and theory. Students produce tapes of significant depth demonstrating technical skills sufficient to support their aesthetic strategies.

## VID 412 - Art Video: Thesis Project

## School of Art and Design

3 credit(s) At least 1x fall or spring
Production of a thesis project, most frequently a suite of related tapes, including written

## UNDERGRADUATE COURSE CATALOG

conceptual/theoretical analysis.

## VID 499 - Honors Capstone Project

## School of Art and Design

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## VID 510 - Video Art History

## School of Art and Design

3 credit(s) At least 1x fall or spring Video art history from the 1960s including the fluxus and art and technology movements, early performance, image processing, installation, and socio-political explorations.

## Drama

## DRA 090 - Theatre Lab

## Drama

0-1 credit(s) Every semester
Weekly department colluquium; work in progress viewed and discussed by faculty and student body. Professionals in the field frequently hold master classes. Required of all drama majors. Repeatable 7 time(s), 8 credits maximum

## DRA 105 - Intro Acting/Non-Majors

## Drama

3 credit(s) Every semester
Basic group exercises and improvisations in vocal and physical relaxation, concentration, and dramatic action.

## DRA 106 - Scene Study for Non-Majrs

## Drama

3 credit(s) Irregularly
Workshop in scene study to develop creative responsiveness to the play script.

## DRA 115 - Intro to Theater

Drama
3 credit(s) At least 1x fall or spring Lecture, reading, and discussion of basic principles of play analysis and mise-en-scène. Application of principles to selected dramatic texts.

## DRA 116 - Intro to the Theatre

## Drama

3 credit(s) At least 1x fall or spring Continuation of DRA 115. Continued application of principles of play analysis and mise-en-scène to the interpretation of selected dramatic texts. PREREQ: DRA 115

## DRA 121 - The Actor's Speech Practicum

## Drama

2 credit(s) At least $1 x$ fall or spring Introductory speech technique for speaking on stage. Course will develop actors' speech skills through vocal practice and the study of phonetics for clear, strong articulation; connection to language; and effective, expressive use of the voice.
COREQ: DRA 125
Repeatable 1 time(s), 4 credits maximum

## DRA 125 - Intro to Acting-Majors

## Drama

3 credit(s) At least 1 x fall or spring Basic group and individual exercises and improvisations in vocal, physical, and emotional relaxation, concentration, and dramatic action. Required of all first-year students majoring in drama.

## DRA 126 - Introduction to Acting

## Drama

6 credit(s) At least 1x fall or spring Continuation of group and individual exercises and improvisations in vocal, physical, and emotional relaxation, concentration, and dramatic action. Required of all first-year students majoring in drama.
PREREQ: DRA 125

## DRA 130 - Tap Dance I

## Drama

2 credit(s) At least 1x fall or spring Introduction to basic tap dance technique and vocabulary, as applied to musical theater. Department consent required.

## DRA 135 - Jazz Dance I

## Drama

2 credit(s) At least $1 x$ fall or spring Introduction to the technique and style of classic and/or contemporary jazz dance, specifically as applied to the musical theater stage. Department consent required.
Repeatable, 4 credits maximum

## DRA 136 - Jazz Dance for Actors

## Drama

2 credit(s)
Introduction to the style and technique of jazz dance, specifically designed for the acting student.
Repeatable 1 time(s), 4 credits maximum

## DRA 140 - Ballet I

## Drama

2 credit(s) Every semester

Introduction to the theory and technique of classical dance as applied to musical theater. Four semesters of ballet are required for musical theater majors. Department consent required. Repeatable

## DRA 210 - Modern Dance for Musical Theater

## Drama

2 credit(s) At least 1 x fall or spring Designed to enhance students' understanding of and ability to perform modern dance technique through exploring the elements of dance: centering the body, gravity, balance, posture, gesture, rhythm, moving in space, and breath. Repeatable, 4 credits maximum

## DRA 220 - Introduction to Scene Study

## Drama

3 credit(s) Every semester
Application of acting fundamentals to scenes from modern drama.
PREREQ: DRA 126
Repeatable 2 time(s), 9 credits maximum

## DRA 221 - Voice/Verse Practicum I

## Drama

3 credit(s) At least 1x fall or spring
Exercises to free the voice from factors inhibiting spontaneous expression of thought and feeling. Students will use Shakespeare's sonnets and other texts in order to learn the basic elements for working with heightened poetic language. PREREQ: DRA 126

## DRA 222 - Voice/Verse Practicum II

## Drama

3 credit(s) At least 1x fall or spring Continuation of DRA 221 with advanced vocal exercises. Students will work with heightened and poetic texts using speeches and short scenes from classical and modern texts.
PREREQ: DRA 221

## DRA 223 - Scene Study with Directors

## Drama

3 credit(s) At least 1x fall or spring
Actors will work with student directors on a wide range of texts in order to develop collaborative vocabulary and technique. Required for all BFA acting majors. BFA majors only.
PREREQ: DRA 220

## DRA 230 - Tap Dance II

Drama
2 credit(s) At least 1 x fall or spring Continuous and progressive study of tap dance technique, including introduction to standard audition material. Preliminary style study. Department consent required.

## DRA 235 - Jazz Dance II

## Drama

2 credit(s) At least $1 x$ fall or spring Continuation of the work begun in Jazz I, progressing to intermediate level turns, jumps, and combinations. Department consent required.
Repeatable 1 time(s), 4 credits maximum

## DRA 240 - Ballet II

## Drama

2 credit(s) Every semester
Continuation of work begun in Ballet I, progressing
to extended adagios, elementary turns, and allegro combinations. Department consent required.
Repeatable 2 time(s), 8 credits maximum

## DRA 260 - Musical Theater Practicum

Drama
1 credit(s) Every semester
Introduction to Musical Theater through analysis, sight reading, vocal technique and practice of the repertoire. Required of all first year students majoring in Musical Theater. Must be taken twice.

## DRA 261 - Intro Mus Thtre Perform I

## Drama

3 credit(s) At least $1 x$ fall or spring
Synthesis of music, lyrics, and acting
fundamentals in the preparation of basic musical theater repertoire for performance. Required of all musical theater majors.
PREREQ: DRA 125 AND DRA 126 AND DRA
260 AND MTC 125 AND MTC 225
COREQ: MTC 226 AND PNO 120

## DRA 262 - Intro Musicl Thtre Perf II

## Drama

3 credit(s) At least $1 x$ fall or spring
Continuation of DRA 261 emphasizing more complex problems from the musical theater repertoire. Required of all musical theater majors.
PREREQ: DRA 261
COREQ: PNO 120

## DRA 270 - Experience Credit

## Drama

1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Permission in advance of assigned instructor, dept chair or dean. Limited to those in good academic standing.
Repeatable

## DRA 273 - Movement for Actors I

## Drama

2 credit(s) At least $1 x$ fall or spring

Movement principles and techniques to develop balance, strength, flexibility, endurance and coordination combined with exercises to build physical awareness, confidence and good anatomical use. Required of all students majoring in Acting.
PREREQ: DRA 126
Repeatable 1 time(s), 4 credits maximum

## DRA 274 - Movement for Actors II

## Drama

2 credit(s) At least $1 x$ fall or spring
Emphasizes dynamic physical practice and analysis in the work of the actor. Required of all students majoring in Acting.
PREREQ: DRA 273
Repeatable 1 time(s), 4 credits maximum

## DRA 305 - Advanced Acting (Drama Minors)

## Drama

3 credit(s) At least $1 x$ fall or spring An experiential exploration of the acting process, focusing on advanced acting techniques and their application to challenging texts, designed for theater minors.
PREREQ: DRA 105

## DRA 310 - Theater Dance Styles I

## Drama

2 credit(s)
Dance styles used in the musical theater repertory. Evolution of theater dance from musical/rhythmic and period sources. Department consent required.
PREREQ: DRA 240
Repeatable 3 time(s), 8 credits maximum

## DRA 311 - Theater Dance Styles II

## Drama

2 credit(s)
Continuation of the work begun in the Styles I course. Emphasizing theater dance styles from the 1890's to the present. Studio investigation of the styles of major musical theater choreographers.
Department consent required.
PREREQ: DRA 240
Repeatable 2 time(s), 8 credits maximum

## DRA 315 - Introduction to Play Analysis

## Drama

3 credit(s) Even Academic Yr e.g. 2004-5
Play scripts as 'scores' for production and performance. Techniques used by directors and designers to develop ideas for shaping the elements of theatrical art into viable production concepts.
PREREQ: DRA 115

## DRA 320 - Adv Acting: Modern Drama

## Drama

3 credit(s) Every semester
Application of acting fundamentals to works of modern naturalism from Ibsen to Shepard. Method: assigned scenes. Prereq: acceptance for advanced work by departmental faculty.
PREREQ: DRA 116 AND DRA 220 TWICE
Repeatable, 6 credits maximum

## DRA 321 - Advanced Voice Practicum I

## Drama

3 credit(s) Every semester
A continuation of DRA 221, 222 exploring
classical texts that challenge the actor
emotionally. The class will cover a wide range of periods and will focus on clear diction and facility with complex spoken language.
PREREQ: DRA 222

## DRA 322 - Advanced Voice Verse Practicum II

## Drama

3 credit(s) Every semester
A continuation of DRA 321, with the possible inclusion of study of stage dialects.
PREREQ: DRA 321

## DRA 328 - Pract. in Stage Makeup

## Drama

2 credit(s) At least 1x fall or spring Problems and practice in stage makeup techniques.

## DRA 330 - Tap Dance III

## Drama

2 credit(s)
Tap dance technique on the intermediate level. Emphasis on technical precision, rhythmic accuracy, dynamics, and stylistic components of tap. Department consent required. PREREQ: DRA 240

## DRA 331 - Introduction to Directing

## Drama

3 credit(s) Every semester
Fundamental practices of stage direction and rehearsal techniques in an acting scene study environment.
PREREQ: DRA 315

## DRA 333 - On-Camera Acting

Drama
3 credit(s) At least 1x fall or spring Acquisition and development of specialist acting skills. Techniques are explored and practiced extensively in front of the camera. Student must have passed the Drama Department's sophomore evaluation.

PREREQ: DRA 220 TWICE
Repeatable 1 time(s), 6 credits maximum

## DRA 335 - Jazz Dance III

## Drama

2 credit(s) At least 1 x fall or spring
Ongoing and progressive study of contemporary jazz dance technique and styles. Intermediate/ advanced level jumps, turns, and combinations.
Department consent required.
PREREQ: DRA 240
Repeatable 2 time(s), 8 credits maximum

## DRA 340 - Ballet III

## Drama

2 credit(s) Every semester
Continuous and progressive studio study of the technique and theory of classical theatrical dance. Intermediate level adagio, turns, petit and grand allegro. Department consent required. Repeatable 4 time(s), 12 credits maximum

## DRA 345 - Dance in New York City

## Drama

3 credit(s) At least 1 x fall or spring
Professional-level dance study in New York City. Students participating in the Drama Department's Tepper Semester attend studio classes at the NYC dance center affiliated with the Tepper program. PREREQ: DRA 240

## DRA 351 - Contemporary Brit Theatre

## Drama

3 credit(s) At least $1 x$ fall or spring Theater in the British Isles; West End and major repertory theaters in London. Readings, lectures, and attendance at and discussion of current productions. Not open to drama majors.

## DRA 352 - Survey of Theatre History

Drama
3 credit(s) At least 1x fall or spring
World theater from its ritual beginnings to the present, with an emphasis on significant theatrical movements, dramatic genres, and styles of performance.
PREREQ: DRA 115

## DRA 355 - Development of Theater and

 Drama I
## Drama

3 credit(s) At least $1 x$ fall or spring
Theater and drama from pre-Greek through
Elizabethan England. Changes in social, cultural, and political context related to changing theatrical and dramatic forms.
PREREQ: DRA 115

## DRA 356 - Development of Theater and Drama II

Drama
3 credit(s) At least 1x fall or spring
Drama and theatrical production from Italian Renaissance through circa 1870.
PREREQ: DRA 115
DRA 358 - Backstory: Devising Original Performance

## Drama

3 credit(s) At least 1 x fall or spring
Designed to provide tools to devise a solo performance piece based on a historic character or event through art, movement and text developed for potential outreach opportunities in the community.
PREREQ: DRA 220
Repeatable 1 time(s), 6 credits maximum

## DRA $\mathbf{3 6 0}$ - Community Actors Workshop

## Drama

1-3 credit(s) At least $1 x$ fall or spring Drama group led by SU Drama students for people in the Syracuse community with special needs. Students facilitate creative dramatics with participants and co-create an end of term production. May be repeated twice for credit. Repeatable 4 time(s), 6 credits maximum

## DRA 362 - Musical Theater Scene

Study
Drama
3 credit(s) Every semester
Study and performance of scenes, duets, trios, and ensembles from the Musical Theater repertoire.
PREREQ: DRA 262

## DRA 371 - Stage Combat

## Drama

2 credit(s) Irregularly
Integrative and intensive training incorporating diverse movement, acrobatic and fighting exercises and techniques specially designed for stage combat. Work on dramatic scenes where combat is used.
PREREQ: DRA 126
Repeatable 1 time(s), 4 credits maximum

## DRA 373-Clown Technique

## Drama

3 credit(s) At least 1x fall or spring
Principles and techniques of clown with elements of the fool, bouffons, and the grotesque. Actor's instincts heightened through exploration of clown logic, the rhythm of failure, repetition and resiliency. Required of all students majoring in Acting.
PREREQ: DRA 274

Repeatable 1 time(s), 6 credits maximum

## DRA 374 - Solo Creation in Physical Poetry

## Drama

3 credit(s) At least 1 x fall or spring Student's create original solo work using the analytical, qualities of physical poetry and exploring the use of theatrical metaphor. Required of all students majoring in Acting. PREREQ: DRA 373

## DRA 375 - Drama Pedagogy

## Drama

1-3 credit(s) Every semester
Students serve as teaching assistants in a variety of curricula.
PREREQ: DRA 116
Repeatable 2 time(s), 9 credits maximum

## DRA 379 - Honors in Drama

## Drama

3 credit(s) Irregularly
Limited to selected students.

## DRA 381 - Italian and European Theater 1500-1700

## Drama

3 credit(s) At least 1x fall or spring
Crosslisted with: LIT 381, WGS 381
Secular and professional drama as it emerged in Renaissance Italy and spread to Spain, England, and France. Selected works of Machiavelli, Monteverdi, Cervantes, Calderon, Shakespeare, Molière, Behn and others (in English). Offered only in Florence.

## DRA 386 - Edinburgh Fringe Festival

## Drama

3 credit(s) Even Academic Yr e.g. 2004-5
Rehearsal and performance of a theatrical production for the Edinburgh Fringe Festival in Scotland.
Repeatable 1 time(s), 6 credits maximum

## DRA 389 - Honors Drama

## Drama

3 credit(s) Irregularly
Assigned problems individually fitted to the needs of the student of play directing, play writing, or theater research, to stimulate creative effort. Senior thesis required detailing results of the particular project.

## DRA 391 - Introduction to Playwriting

## Drama

3 credit(s) At least $1 x$ fall or spring Introductory practice in the writing and development of dramatic structure,
characterization, dialogue. Practice in writing the short play.
PREREQ: DRA 115

## DRA 392 - Playwriting

## Drama

3 credit(s) At least $1 x$ fall or spring
Building upon principles learned in DRA 391
students will investigate, develop, and write exercises in dramatic style, form, and point of view. Practice in writing standard one-act play. PREREQ: DRA 391

## DRA 400 - Selected Topics

## Drama

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## DRA 405 - Advanced Acting Styles (Drama Minors)

## Drama

3 credit(s)
An experiential exploration of the acting process, focusing on advanced acting techniques and their application to classical and poetic texts, designed for drama minors.
PREREQ: DRA 305

## DRA 420 - Advanced Scene Study: Poetic Drama

## Drama

3 credit(s) Every semester
Dealing with acting challenges posed by verse and other forms of poetic writing from the classical repertoire, such as Shakespeare and the ancient Greeks. Acceptance for advanced work by drama department faculty. BFA majors only.
PREREQ: DRA 116 AND DRA 220 TWICE
Repeatable 3 time(s), 12 credits maximum

## DRA 422 - Period Style in Theatrical Performance

## Drama

3 credit(s) Irregularly
Development of the use of language and body in a wide variety of plays, ranging from classical Greek to modern. Permission of instructor.

## DRA 423 - Character Mask for the

 Actor
## Drama

3 credit(s) Irregularly
Exploration of extreme character and composition using advanced physical vocabulary and character mask exercises in the tradition of LeCoq.

DRA 424 - Assistant Directing:
Elizabethan and Romantic Plays
Drama
1-3 credit(s) At least $1 x$ fall or spring
Assigned work as assistant director for production of DRA 524 class.
PREREQ: DRA 331 AND DRA 355 AND DRA 356
DRA 425 - Assistant Directing: Classic and Classicist Mode

## Drama

1 credit(s) At least 1 x fall or spring
Assigned work as assistant to director for production of DRA 525.
PREREQ: DRA 331 AND DRA 355 AND DRA 356
DRA 426 - Assistant Directing: Drama in the Naturalistic Mode

## Drama

1 credit(s) At least 1x fall or spring
Assigned work as assistant director for production of DRA 526.
PREREQ: DRA 331 AND DRA 355 AND DRA 356

## DRA 430 - Tap Dance IV

## Drama

2 credit(s)
Studio study of tap dance technique on the advanced level. Progression to extended combinations, stressing technical and rhythmic accuracy in a variety of dance styles. Department consent required.
PREREQ: DRA 240
Repeatable, 4 credits maximum

## DRA 435 - Jazz Dance IV

## Drama

2 credit(s) At least 1 x fall or spring
Advanced classic and/or contemporary jazz dance technique and style for musical theater performers. Progression to advanced level jumps, turns and combinations. Emphasis on style, performance and audition strategies. Department consent required.
PREREQ: DRA 240
Repeatable 2 time(s), 8 credits maximum

## DRA 441 - Ballet IV

## Drama

2 credit(s) Every semester
Advanced ballet technique for musical theater performers. Progression to complex combinations, turns, grand allegro. Consideration of stylistic elements and performance qualities. Department consent required.
PREREQ: DRA 240
Repeatable 6 time(s), 16 credits maximum

## DRA 444 - Directing: One-Act Play

## Drama

2 credit(s) Upon sufficient interest
Students will direct a one-act play lasting no more than 75 minutes. This play will include work with challenging text and production design elements.
PREREQ: DRA 315 AND DRA 331 AND (DRA
424 OR DRA 425 OR DRA 426)
Repeatable, 4 credits maximum

## DRA 445 - Directing: Full-Length Play

## Drama

3 credit(s) Upon sufficient interest Direct a full-length play, lasting more than 75 minutes. This play will include work with challenging text and production design elements. PREREQ: DRA 444 AND (DRA 424 OR DRA 425 OR DRA 426)
Repeatable, 6 credits maximum

## DRA 450 - Advanced Musical Theater Repertoire

## Drama

3 credit(s) Every semester
Advanced problems in songs from the entire musical theater repertoire. Emphasis is placed on developing the students' abilities to choose and prepare repertoire appropriate to their strengths. One semester required of all musical theater majors.
PREREQ: DRA 262
Repeatable 1 time(s), 6 credits maximum

## DRA 451 - Topics in Theatrical and Dramatic History

## Drama

3 credit(s) Irregularly
Period, stylistic development, or other aspect of the history of theater and drama selected by the department and announced before registration. Repeatable

## DRA 452 - Topics in Modern Theater and Drama

## Drama

3 credit(s) Irregularly
Aspect of the development of the theater and drama of our time selected by the department and announced before registration. May be repeated for credit.
PREREQ: DRA 451
Repeatable
DRA 453 - History of Musical Theater

## Drama

3 credit(s) At least $1 x$ fall or spring
Survey of musical theater genres, composers, and lyricists, directors, choreographers and performers, from circa 1860 to the present. Required of all musical theater majors.

## UNDERGRADUATE COURSE CATALOG

## PREREQ: DRA 115

## DRA 461 - Musical theater <br> Performance-Cabaret

## Drama

3 credit(s) At least 1x fall or spring Students will create, produce, publicize, rehearse, and perform their own cabaret presentations. PREREQ: DRA 262

## DRA 462 - Auditioning:Musical Thtr

## Drama

3 credit(s) Every semester
Repertoire, techniques, and procedures necessary for a professional career in musical theater. Practice, lecture/discussion, and readings.
PREREQ: DRA 262 AND 450

## DRA 480 - International Course

## Drama

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## DRA 499 - Honors Capstone Project

Drama
1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## DRA 515 - Play Analysis and Introduction to Mise-en-Scène

## Drama

3 credit(s) At least $1 x$ fall or spring Play scripts as "scores" for production and performance. Techniques used by directors and designers to develop ideas for shaping the elements of theatrical art into viable production concepts. Constructive production criticism. PREREQ: DRA 115

## DRA 520 - Graduate Scene Study I

## Drama

0-3 credit(s) Every semester
Problems in characterization, period, and language posed by masterworks of prose drama. Scenes from Ibsen, Chekhov, Shaw, etc. Repeatable 1 time(s), 9 credits maximum

## DRA 523 - Audition Technique

Audition procedures and techniques necessary for a career in theater, film, and television. Course will include readings, lecture/discussion, and practice. Student must have passed sophomore evaluations.
PREREQ: DRA 220 TWICE
Repeatable 1 time(s), 6 credits maximum

## DRA 524 - Acting: Drama in the Elizabethan and Romantic Modes

## Drama

$0-3$ credit(s) At least $1 x$ fall or spring Character study, scene work, rehearsal, and performance of plays in the Elizabethan and/ or romantic modes. Plays may be either of the historical periods or modern works in the same style. Instructor determines credit load of each student individually.
PREREQ: DRA 126
Repeatable 3 time(s), 12 credits maximum

## DRA 525 - Acting: Drama in Classic and Classicist Mode

## Drama

$0-3$ credit(s) At least $1 x$ fall or spring Character study, scene work, rehearsal, and performance of plays in classic or classical modes. Plays may be Greek, Roman, neoclassical, or modern works in the same style. Instructor determines the credit load of each student individually.
PREREQ: DRA 126
Repeatable 3 time(s), 12 credits maximum

## DRA 526 - Acting: Drama in the

 Naturalistic Mode
## Drama

$0-3$ credit(s) At least $1 x$ fall or spring Character study, scene work, rehearsal, and performance of plays in the naturalistic tradition. Instructor determines the credit load of each student individually.
PREREQ: DRA 126
Repeatable 3 time(s), 12 credits maximum

## DRA 527 - Dialects

## Drama

3 credit(s) Irregularly
Standard foreign dialects for dramatic purposes using phonograph records and phonetic transcriptions of foreign dialects.

## DRA 528 - Dialects Workshop

## Drama

3 credit(s) Irregularly
Continuation of DRA 527.
PREREQ: DRA 527

## DRA 529 - Acting for the Frame

## Drama

3 credit(s) At least $1 x$ fall or spring
Acquisition and development of specialist screen acting skills. Techniques are explored and practiced extensively in front of the camera. Offered only in London. Admission to the London Drama Program by permission of department chair.
PREREQ: DRA 355 AND DRA 356

## DRA 530 - Advanced Actors Workshop

## Drama

3 credit(s) Every semester
Scene study. Selection by audition and interview. Repeatable 1 time(s), 9 credits maximum

## DRA 532 - Directing: Special Problems

## Drama

3 credit(s) Irregularly
Specific area of directing selected by the department and announced before registration. May be repeated for credit, if problems differ.
PREREQ: DRA 515
Repeatable

## DRA 539 - Directors' Workshop

## Drama

3 credit(s) Irregularly
Increasing conceptual skills and rehearsal techniques by directing assigned materials under close faculty supervision. Selection by interview.

## DRA 540 - Theater Dance Repertory

## Drama

1-2 credit(s)
Studio study of significant choreography from the musical theater repertoire. Emphasizing technical accuracy, stylistic integrity, and performance quality. Department consent required.

## DRA 550 - Professional Practices

## Drama

3 credit(s) At least 1x fall or spring Focus on career development, practical skills and auditioning: including master classes with professionals, lectures, discussions, and site visits to professional venues. Specifically related to theater in New York City (Tepper Semester)

## DRA 554 - Emergnce of Modrn Theater

## Drama

3 credit(s) Irregularly
Sources of the modern theater and development of styles and movements from the nineteenth century. Influential social and cultural forces in historical context.

## Drama

3 credit(s) Every semester

## DRA 555 - History American Theatre

## Drama

3 credit(s) Irregularly
Development of American theater from colonial origins to present. Emergence of a distinctive national tradition.

## DRA 560 - Music Theater Production

## Drama

0-3 credit(s) Every semester
Character study, scene work, music and dance work, rehearsal and performance of musical theater works. Admission by audition and permission of instructor only. Instructor to determine credit load of each student individually. PREREQ: DRA 126
Repeatable

## DRA 561 - Music and Shakespeare

## Drama

3-4 credit(s)
Crosslisted with: HOM 561
A discussion-based course investigating the place of music in Shakespeare's plays. Also considers the role of music in early modern English culture as well as later musical adaptations of Shakespeare.

## DRA 581 - Intro to Playwriting

## Drama

3 credit(s) Upon sufficient interest
Structure, characterization, dialogue. Practice in writing the short play.
PREREQ: DRA 315 OR DRA 515

## DRA 582 - Play Writing

## Drama

3 credit(s) Upon sufficient interest
Continuation of DRA 581.
PREREQ: DRA 581
DRA 591 - Development of the Full-
Length Play

## Drama

3 credit(s) At least $1 x$ fall or spring Building on principles learned in DRA 391 and 392, student playwrights will investigate genre, structure, magnitude and voice in developing the full-length play.
PREREQ: DRA 392

## DRA 592 - Writing and Revising the Full-Length Play

## Drama

3 credit(s) At least $1 x$ fall or spring Building on the knowledge and skills developed in DRA 391, 392, and 591 students will complete and revise a fully realized standard length play. PREREQ: DRA 591

## Design/Technical Theater

## DRD 111 - Media, Methods, and Materials in Theatrical Design

Drama
3 credit(s) At least 1x fall or spring Media, materials, and techniques employed in design for theatrical production. Required of all students planning further work in design and technical theater.

## DRD 112 - Drafting for the Theater

 Drama3 credit(s) At least 1x fall or spring
The theories and practices of drafting for theatrical production. Graphic solutions, focusing on the communication of design ideas through the proper use of manual drafting instruments.

## DRD 115 - Introduction to Theater Production I

Drama
2 credit(s) At least $1 x$ fall or spring Lecture, reading, and discussion of major aspects of theater production. Participation in construction, running, and front-of-house crews for Drama Department productions. Required of Acting and Musical Theater majors.

## DRD 116 - Introduction to Theater Production II

## Drama

2 credit(s) At least 1x fall or spring
Continuation of DRD 115.

## DRD 140 - Introduction to Theater Crafts I

## Drama

3 credit(s) At least 1x fall or spring Class format combines lecture and experiential/ studio assignments in the study of scenery, props, scenic art, costumes, lighting and, sound.

## DRD 141 - Introduction to Design for the Theatre

## Drama

3 credit(s) At least 1x fall or spring First semester: set, costume, and lighting design using drawings, perspective, costume sketching, and lighting techniques. Second semester: continuing examination of the design process, focusing on specific plays. Must be taken in sequence.

DRD 142 - Introduction to Design for the Theatre

## Drama

3 credit(s) At least 1x fall or spring
First semester: set, costume, and lighting design
using drawings, perspective, costume sketching, and lighting techniques. Second semester: continuing examination of the design process, focusing on specific plays. Must be taken in sequence.
PREREQ: DRD 141

## DRD 240 - Introduction to Theater Crafts II

## Drama

3 credit(s) At least 1x fall or spring
Continuation of DRD 140.

## DRD 270 - Experience Credit

## Drama

1-6 credit(s) Irregularly
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## DRD 301 - Fundamentals of Theater Design

## Drama

3 credit(s) At least 1 x fall or spring Basic theory and techniques of design for the stage. Includes scenery, costumes and lights. Open to non-Design/Tech majors by Department consent.
PREREQ: DRD 115

## DRD 311 - Scene Design I

## Drama

3 credit(s) At least 1x fall or spring Exploration of the art, history and practice of scenic design for theater. The ideas and concepts of scenic development are investigated through research and practical experience. Department consent required for non-TDT majors.
PREREQ: DRD 112 AND DRD 142

## DRD 312 - Scene Design II

## Drama

3 credit(s) At least 1x fall or spring Continued exploration of the history and practice of scenic design for the theater. Design projects will include topics such as advanced script analysis, experimental and alternative spaces and diverse entertainment productions..
PREREQ: DRD 311

## DRD 313 - CAD for the Theater

## Drama

3 credit(s) At least 1x fall or spring Introduction to the theories and practices of computer aided drafting (CAD) for theatrical production. Department consent required for non-

TDT majors.
PREREQ: DRD 112

## DRD 316 - Practicum in Scenery Construction

## Drama

2 credit(s) At least $1 x$ fall or spring Standard scenic construction tools, techniques and practices with practical application supervised by Syracuse Stage professional staff. PREREQ: DRD 140 AND DRD 240

DRD 317 - Practicum in Scene Painting

## Drama

2 credit(s) At least 1 x fall or spring Problems and practice in scene painting, supervised by Syracuse Stage professional staff. PREREQ: DRD 140 AND DRD 240 Repeatable

## DRD 318 - Practicum in Stage Properties

## Drama

2 credit(s) At least $1 x$ fall or spring Problems and practices in the procuring or design and construction of stage properties, supervised by Syracuse Stage professional staff. PREREQ: DRD 140 AND DRD 240

## DRD 321 - Theatrical Costume Design I

## Drama

3 credit(s) At least 1 x fall or spring Role of the costume designer in the production process. Studio problems in design of costumes for theatrical productions of plays. Department consent required for non-TDT majors.
PREREQ: DRD 142

## DRD 322 - Theatrical Costume Design II

## Drama

3 credit(s) At least 1x fall or spring Continuation of DRD 321. Role of the costume designer in the production process. Studio problems in design of costumes for theatrical productions of plays.
PREREQ: DRD 321

## DRD 327 - Pract. in Costume

## Drama

2 credit(s) Upon sufficient interest
Problems and practice in design and construction of costumes, supervised by Syracuse Stage professional staff.
PREREQ: DRD 140
Repeatable

DRD 329 - Advanced Practicum in Costume Construction<br>Drama<br>2 credit(s) At least 1x fall or spring<br>Advanced problems and practice in construction<br>of theatrical costumes.<br>PREREQ: DRD 327

DRD 331 - Stage Lighting I

## Drama

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: DRD 631
Elementary physics of lighting and electricity. Lighting instruments and controls. Function of theatrical lighting. Outstanding lighting designs of past and current productions. Students design complete light plots.

## DRD 332 - Stage Lighting II

## Drama

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: DRD 632
Continuation of DRD 631/331. Required of all majors in design/technical theater, and graduate students in stage design.
PREREQ: DRD 331

## DRD 337 - Practicum in Stage Lighting <br> Drama <br> 2 credit(s) At least 1x fall or spring Problems and practices in stage lighting, supervised by Syracuse Stage professional staff. PREREQ: DRD 140

## DRD 338 - Practicum in Theater Sound

 Drama2 credit(s) At least $1 x$ fall or spring
Problems and practice in theater sound, supervised by Syracuse Stage professional staff. PREREQ: DRD 140 AND DRD 240

## DRD 411 - Scene Design III

## Drama

3 credit(s) At least $1 x$ fall or spring Advanced problems in scene design. At least three completely designed plays prepared as if for actual production.
PREREQ: DRD 312

## DRD 412 - Advanced Techniques in Theatrical Rendering

Drama
3 credit(s) At least 1x fall or spring Continued study in a variety of graphic techniques used to illustrate theatrical designs through exploring an expanded range of media and materials.
PREREQ: DRD 111 AND DRD 311 OR DRD 321
Repeatable 1 time(s), 6 credits maximum

## DRD 414 - Advanced Projects in Entertainment Design <br> Drama <br> 3 credit(s) At least 1x fall or spring The exploration, through advanced design projects, of various methods of discovering, formulating, and communicating design ideas for productions in a variety of performance genres and styles of entertainment design. <br> PREREQ: TWO OF THE FOLLOWING: DRD 312 OR <br> DRD 322 OR DRD 332

## DRD 421 - Theatrical Costume Design

III

## Drama

3 credit(s) At least 1 x fall or spring
Advanced studio problems in theatrical costume design.
PREREQ: DRD 322

## DRD 427 - Tailoring Techniques for the Theater

## Drama

3 credit(s) Upon sufficient interest Traditional tailoring techniques adapted to costume construction.
PREREQ: DRD 329

## DRD 428 - Costume Draping and Pattern Drafting

## Drama

3 credit(s) Upon sufficient interest
Theory and practice of techniques used in creating patterns for use in theatrical costume construction.
PREREQ: DRD 327 OR DRD 329

## DRD 429 - Costume Crafts Seminar

## Drama

3 credit(s) Upon sufficient interest
Theory and practice of techniques used in creating theatrical costume pieces that are crafted rather than sewn.
PREREQ: DRD 140

## DRD 431 - Stage Lighting III

## Drama

3 credit(s) At least $1 x$ fall or spring
Continuation of the principles and practices of modern stage lighting as an art form. Advanced theories will be investigated involving multi-scene, repertory, thrust and arena lighting design.
PREREQ: DRD 332

## DRD 433 - Advanced Techniques in Stage Lighting Technology

## Drama

3 credit(s) Even Academic Yr e.g. 2004-5
Advanced lighting technology, software and
control systems.
PREREQ: DRD 140 AND DRD 240 AND DRD 337

## DRD 441 - Adv.Stgcrft./Th.Tech.

## Drama

3 credit(s) At least 1x fall or spring
Permission of Instructor.

## DRD 442 - Structural Design for the Stage

Drama
3 credit(s) Upon sufficient interest An introduction to the analysis of forces acting on physical structures in static equilibrium (Statics) and the interpretation and application of the results in theatrical scenic construction.

## DRD 443 - Stage Rigging

## Drama

3 credit(s) Upon sufficient interest
A study of accepted, safe rigging practices. Primary focus is on the most common methods and materials of the trade. Secondary focus is on a variety of less common techniques, equipment, and practices.
PREREQ: DRD 140 AND DRD 240

## DRD 445 - Professional Practices for Theater Design and Technology

## Drama

3 credit(s) At least 1 x fall or spring Exploration and identification of anticipated challenges for the emerging theater design professional. Focus on career development; how to manage oneself legally, financially and ethically within the profession.

## DRD 470 - Experience Credit

## Drama

1-6 credit(s) Irregularly
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.
Repeatable

## DRD 480 - International Course

## Drama

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

DRD 499 - Honors Capstone Project<br>Drama<br>1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## DRD 501 - Design for Directors

## Drama

3 credit(s) Upon sufficient interest
Basic theory and techniques of design for the stage. Communicating ideas to designers and vice versa.

## DRD 541 - Projects in Technical Practice I

## Drama

3 credit(s) Upon sufficient interest Solution of advanced problems in all phases of technical practice, fitted to the needs of the individual student as far as possible. Department consent required.

## DRD 542 - Projects in Technical Practice II

## Drama

3 credit(s) Upon sufficient interest Continuation of DRD 541. Department consent required.
PREREQ: DRD 541

## DRD 555 - Evolution of Stage Design Drama <br> 3 credit(s) Upon sufficient interest Study of the modern history of scenography, putting contemporary stage design into cultural and historical context through exploration of period style, dramatic literature, director methodology, art and architecture, and theater technology cultural and historical context.

DRD 599 - Internship in Theatrical Design, Technology, or Management

## Drama

3-9 credit(s) Upon sufficient interest Qualified senior and graduate students are assigned to staff positions with Syracuse Stage for semester or year in areas of students' individual professional training and goals.

## Drama Management

## DRM 100 - Selected Topics

## Drama

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable, 6 credits maximum

## DRM 194 - Introduction to Theatre Management

## Drama

3 credit(s) At least 1x fall or spring
Class lectures, discussion, and conversations with management guests from Syracuse Stage, Drama Department and from other professional cultural organizations from central NY and NYC. Student participation in classroom discussions is of particular importance.

## DRM 251 - Introduction to Stage Management

## Drama

3 credit(s) At least 1x fall or spring
Combined classroom and practicum investigation of the stage management system. Student will be assigned as an assistant stage manager on an SU Drama production while discussing the elements of stage management in the classroom.

## DRM 261 - Stage Management Core Skills Lab

## Drama

3 credit(s) At least $1 x$ fall or spring
Practical application of core stage management skills( including blocking, prompting, calling technical cues, organizing scene changes, running technical rehearsals, scheduling and personnel management) are exercised using actual production scenarios in a laboratory setting.
PREREQ: DRM 251
Repeatable 1 time(s), 6 credits maximum

## DRM 270 - Experience Credit

## Drama

1-6 credit(s) Every semester
Participation in a discipline or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Permission in advance of assigned instructor, dept. chair or dean.
Repeatable

## DRM 340 - Stage Management Rehearsal Techniques

## Drama

2 credit(s) At least $1 x$ fall or spring
Exploration of techniques used by stage manager in rehearsal process. Topics include technical script analysis, blocking, prompting, scheduling, and effective use of assistants.
PREREQ: DRM 251

## DRM 381 - Theatre Management Practicum

## Drama

1-3 credit(s) Every semester

Provides opportunities to apply the skills and techniques of theatre management in a practical application. Students will work on specific goals using management projects and/or internships during the semester.
PREREQ: DRM 194 AND 251
Repeatable 3 time(s), 12 credits maximum

## DRM 394 - Theatre Management I

## Drama

3 credit(s) Every semester
History of management in American theater. Management aspects of community theater, regional theater, summer stock, New York commercial theater, educational theater. Permission of instructor.

## DRM 395 - Theatre Management II

## Drama

3 credit(s) At least $1 x$ fall or spring
The creation of a detailed budget of a theatrical season including all income and expenses.
Budgets will adhere to rules of theatrical unions based on collective bargaining agreements and Federal, state, and local laws.

## DRM 450 - Stage Management:

 Performance Techniques
## Drama

3 credit(s) At least 1x fall or spring
Exploration of techniques used by stage managers in the performance process. Topics include running technical and dress rehearsals, calling shows, managing and maintaining performances. PREREQ: DRM 251 AND DRM 340

## DRM 460 - Stage Management for Production

## Drama

1-4 credit(s) Every semester
Assigned work as a stage manager for Drama
Department production. Exploration of all aspects of stage management in actual production. PREREQ: DRD 140 AND DRD 240 AND DRM 251 Repeatable 3 time(s), 10 credits maximum

## DRM 465 - Stage Management: Communication and Collaboration

## Drama

3 credit(s) At least 1 x fall or spring Communication and collaboration as applied to specific theatrical production scenarios. PREREQ: DRM 251

DRM 467 - Stage Management: Touring Techniques

## Drama

3 credit(s) At least $1 x$ fall or spring Exploration of stage management techniques used specifically in touring theatrical productions.

PREREQ: DRM 251 AND DRM 340 AND DRM 450

## DRM 470 - Experience Credit

## Drama

1-6 credit(s) Every semester
Participation in a discipline or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Permission in advance of assigned instructor, dept. chair or dean.
Repeatable

## DRM 480 - International Course

## Drama

1-12 credit(s) Irregularly
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## DRM 490 - Independent Study

## Drama

1-6 credit(s) Every semester
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## DRM 492 - Production Management <br> Drama

3 credit(s) At least $1 x$ fall or spring
The role of the production manager in the process of producing a theatrical season and administering a production department.
PREREQ: DRM 251 AND DRM 340 AND DRM 450

## DRM 499 - Honors Capstone Project

## Drama

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable, 3 credits maximum

## Communication and Rhetorical Studies

## CRS 125 - Law and Legal <br> Communication

Communication and Rhetorical Studies
3 credit(s) Only during the summer Introduction to basic concepts in the criminal justice system. Principles of argumentation, persuasion, and legal communication as a part of
mock trial preparation.

## CRS 181 - Concepts \& Perspectives in Communication Studies

## Communication and Rhetorical Studies

3 credit(s) At least $1 x$ fall or spring Overview of everyday interaction and extent to which content and forms of communication shape social realities. Broad introduction to field of communication.

## CRS 183 - Concepts and Perspectives in Rhetorical Studies

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring
History of rhetorical studies from classical antiquity to contemporary times. Explores conceptualizations and understandings which serve as a method of recognizing, analyzing, and evaluating persuasive impulses.

## CRS 225 - Public Advocacy

## Communication and Rhetorical Studies

3 credit(s) Every semester
Principles, practice, and criticism of informative, persuasive, and ceremonial speeches. Enhances student capacity to respond appropriately to a variety of speaking situations.

## CRS 270 - Experience Credit

## Communication and Rhetorical Studies

1-6 credit(s) Upon sufficient interest Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable, 6 credits maximum

## CRS 287 - Foundations of Inquiry in Human Communication

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring Introduction to the various issues, arguments, positions, and concerns that frame the research methods and techniques that guide the study of communications.

## CRS 290 - Independent Study

Communication and Rhetorical Studies
1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.

## CRS 313 - Nonverbal Communication

Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring

Nonverbal message systems in interpersonal communication. Factors affecting the nature and quality of interaction: spatial, temporal, gestural, artifactual, tactile, and cultural.

## CRS 314 - Performance Studies

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Performance as a political project that privileges the body as a site of knowledge. The politics, implications, and possibilities of personal narratives.

## CRS 315 - Frontiers of Communications

Communication and Rhetorical Studies
3 credit(s) Irregularly
Double Numbered with: CRS 615
Focus given to communication demands from new technologies. Technology as a form of rhetoric, emphasizing the role of speech communication in the future including socio-cultural implications of technology. Additional work required of graduate students.

## CRS 316 - Introduction to Visual Culture

## Communication and Rhetorical Studies

3 credit(s) Every semester
Crosslisted with: ART 316, TRM 316
Introduction to critical approaches that illuminate how modes of visual culture function as rhetoric, commerce, art, and ideological expression. Examines how institutional frameworks shape global image circulation.

## CRS 317 - Innovation in

Communication and Rhetoric
Communication and Rhetorical Studies
3 credit(s) Irregularly
Double Numbered with: CRS 617
Understanding innovation as a communication and rhetorical phenomenon, and to identify how innovation emerges from different communication and rhetorical practices.

## CRS 325 - Presentational Speaking

## Communication and Rhetorical Studies

3 credit(s) Every semester
Conceptual and practical dimensions of formal presentations in organizational settings.
Analysis, adaptation, strategic arrangement and development of ideas, verbal and nonverbal presentational skills.

## CRS 327-Speechwriting

Communication and Rhetorical Studies
3 credit(s) At least $1 x$ fall or spring
Double Numbered with: CRS 627
Principles and practices of writing ceremonial and
persuasive speeches for clients. Additional work required of graduate students.
PREREQ: CRS 225 OR CRS 325

## CRS 328 - Dialogue and Experience

Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring Introduction to the notion of dialogue as a way of embodying the world. It highlights the various concerns, issues, and ideas that surround the evolution of dialogue.

## CRS 331 - Interpersonal Communication

Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring Application of communication theory to a wide variety of social situations. Assessing communication competence, problem solving, and relationship management.

## CRS 333 - Small Group Communication

Communication and Rhetorical Studies 3 credit(s) Every semester
Group communication as a decision making process. Problem solving. Critical and creative thinking, presentational skills. Designed to improve decision quality through discussion skills and the strategic application of group decision theories and techniques.

## CRS 334 - Introduction to Argumentation

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring Theoretical grounding for an argument-field approach. Includes critical understanding and use of evidence and reasoning in argument. Brief writing, cross-examination, argument construction and organization, issues analysis, and refutation and rebuttal.

## CRS 335 - Leadership/Stewardship Communication

## Communication and Rhetorical Studies

3 credit(s) At least $1 x$ fall or spring
Leader-follower relations as they are constituted communicatively in partnerships. Communication competencies emphasized include empowerment, innovation, ethics, conflict, and influence.

## CRS 336 - Communication and Organizational Diversity

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring
Diversity issues in organizations. Self reflection on assumptions about difference. Organizations and differences as communicatively constituted. PREREQ: CRS 181

## CRS 338 - Communication in Organizations

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring
Principles and practices of organizational communication, including methods of assessing communication practices. Various communication perspectives are applied to case studies and organizational activities.
PREREQ: CRS 333

## CRS 339-Communication, Space and Design

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Examination of spaces and designs as rhetorical and communication phenomena. How we organize space and, in turn, how the organization of our spaces shapes how we interact, organize, and relate to others and the world.

## CRS 345 - Topics in Debate

## Communication and Rhetorical Studies

3 credit(s) Irregularly Examines the influence of debates in political contexts. May examine presidential, legislative, judicial or public forum debates and influence of debating in political communication.

## CRS 347 - Mindful Communication Skills

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring Develop communication skills including awareness of self-talk, anxiety/stress, listening and speaking habits, and sense of self that create and affect communication patterns. Responding rather than reacting in communication episodes.

## CRS 355 - Political Communication

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Investigates the relationship between communication and politics. Highlights communication-related issues involved in political processes and focuses on the extent to which communication is an essential aspect of political systems.

## CRS 360 - Communication and Rhetorical Studies in Perspective

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring
Development of theories of communication and rhetoric that enhance the understanding of their impact on human behavior.
Repeatable 2 time(s), 9 credits maximum

## CRS 375 - Rhetoric and Public Memory <br> Communication and Rhetorical Studies <br> 3 credit(s) Irregularly <br> Investigates the rhetoric of public memory, or the ways that communities create and communicate knowledge of the past from one generation to the next.

## CRS 377-Communication, Nature \& Sustainability

Communication and Rhetorical Studies
3 credit(s) Irregularly
How does communication mediate the relationship between people and nature? What are the different environmental discourses and rhetorics which affect how we conceive our place in nature? Are these sustainable?

## CRS 384 - Discourse and Society

Communication and Rhetorical Studies 3 credit(s) Irregularly
This course examines how discourse and social interaction works to constitute our social realities. Topics covered: meaning, context, sequence, narrative, politeness/face, talk-in-interaction, identity, power, dialects, and various language controversies.

## CRS 414 - Communication \& Gender

Communication and Rhetorical Studies
3 credit(s) At least $1 x$ fall or spring
Crosslisted with: WGS 414
Exploration of assumptions under-lying different approaches to gender and communication. Gender and power implications of understanding communication as socially constructing identity and societal structures.

## CRS 425 - Advanced Public Speaking

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring
Students create and deliver manuscript speeches on subjects of social, political, and philosophical interest. Emphasizes rhetorical style and concepts of eloquence.
PREREQ: CRS 225 OR CRS 325

## CRS 426 - Persuasion

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring Contemporary behaviorist, cognitive, and language-based theories of persuasion. Modes of inquiry used to investigate persuasion. The behavioral compared and contrasted with the rhetorical perspective.

## CRS 430 - Intercultural Communication

Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CRS 630
Principles and applications. Approaches and issues pertinent to effective communication across cultures and in multicultural societies. Verbal and nonverbal patterns. Culture shock.

## CRS 435 - Interviewing

Communication and Rhetorical Studies
3 credit(s) Every semester
Dyadic communication principles. Adaptation of interpersonal communication to interviewing situations: in-depth informational, resume-based employment, and problem solving. Analysis of student-designed survey questionnaires. Normal and stressful interpersonal relationships.

## CRS 436 - Feminist Rhetoric(s)

Communication and Rhetorical Studies
3 credit(s) Irregularly
Crosslisted with: WGS 436, WRT 436
Double Numbered with: CRS 636
Feminist rhetoric from both a historical and global context, utilizing both primary and secondary readings in order to gain a sense of breadth and depth in the field of feminist rhetoric. Additional work required of graduate students.

## CRS 438-Organizational Simulation <br> Communication and Rhetorical Studies

3 credit(s) Irregularly
Students participate in a simulated organization; produce and market communication-related products and services; observe and analyze communication processes.
PREREQ: CRS 338
Repeatable 1 time(s), 6 credits maximum

## CRS 439 - Critical Whiteness Studies

Communication and Rhetorical Studies
3 credit(s) Irregularly
Considers how white race privilege is socially constructed through communication (including through visual, social, and literary texts), while exploring its material effects in the day-to- day lives of those of all racial backgrounds.

## CRS 444 - Senior Capstone Seminar

Communication and Rhetorical Studies
3 credit(s) Irregularly
A culminating research project on a
communication and rhetorical concept, object, or phenomenon.

## CRS 446 - Seminar in Legal Communication

## Communication and Rhetorical Studies

3 credit(s) At least 1x fall or spring
Legal communication as it defines a fielddependent context for argumentation. Variables which inform legal argument from the field of communication including nonverbal, language, role, and environmental influences. Permission of instructor

## CRS 451 - Visual Culture Past and Present: Gender, Religion and Politics

## Communication and Rhetorical Studies

3 credit(s) Every semester
Crosslisted with: HST 451, REL 451, WGS 451
Offered only in Florence. Contemporary visual culture; its representation of gender, religion, and politics and the origins of that representation in a pictorial language first codified in Italy and Europe between circa 1450 and 1650.

## CRS 455 - Rhetorical Criticism

## Communication and Rhetorical Studies

3 credit(s) At least $1 x$ fall or spring
Different perspectives of rhetorical criticism. Explicating the assumptions underlying different approaches to rhetorical criticism. Students learn and apply contemporary critical methods in the study of discursive practices.

## CRS 456 - Empirical Methods of Communication Research

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Social scientific methods that underlie communication theory. Both quantitative and qualitative methods, including experimental design and field study techniques.

## CRS 458 - Applied Communication Research

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Applied research methods and techniques used in the study of communication and culture within human organizations. Requires conducting an applied study.

## CRS 466 - Ethics in Human Communication

Communication and Rhetorical Studies
3 credit(s) Irregularly
Examination of ethical constraints, dilemmas, and boundaries in various communication processes.

## CRS 470 - Experience Credit

Communication and Rhetorical Studies
1-6 credit(s) Upon sufficient interest

Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## CRS 483 - Rhetoric of Film

Communication and Rhetorical Studies
3 credit(s) Irregularly
Double Numbered with: CRS 683
Examination of how popular films and documentaries function rhetorically to reflect and construct social and political change.

## CRS 490 - Independent Study

## Communication and Rhetorical Studies

1-6 credit(s) Upon sufficient interest In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## CRS 499 - Honors Capstone Project

## Communication and Rhetorical Studies

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## CRS 514 - Language \& Meaning

Communication and Rhetorical Studies
3 credit(s) Irregularly
Analysis of language and social interaction in various contexts; language and social identity.

## CRS 531 - Advances in Interpersonal Communication

Communication and Rhetorical Studies
3 credit(s) Irregularly
Introduction to contemporary theories and research in the field of interpersonal communications; array of theoretical models and research exemplars.
PREREQ: CRS 331

## CRS 532 - Family Communication

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Examination of communication processes which constitute and reflect family functioning. Power and conflict, predictable and unpredictable stress, paradoxes and double binds, family life cycle, and communication competence. Permission of Instructor.

## CRS 535-Communication \& Community <br> Communication and Rhetorical Studies

3 credit(s) Irregularly
Examines current concepts of interpersonal communication and their historical development. Demonstrates how interpersonal communication influences and is influenced by community contexts.
PREREQ: CRS 331
CRS 538 - Advances in Organizational Speech Communication

Communication and Rhetorical Studies
3 credit(s) Irregularly
Concepts and theoretical perspectives. Organizational dynamics; communication issues and problems. Permission of Instructor. PREREQ: CRS 338

## CRS 545 - Issues in Argumentation

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Emerging perspectives of the field theory of argument, constructivist approaches, cognitive approaches, against traditional models of argumentation. Permission of Instructor. PREREQ: CRS 334

CRS 551 - History of British Public Address

Communication and Rhetorical Studies
3 credit(s) Irregularly
Public address as an influence in the political, legal, social, and religious history of England. Permission of instructor

## CRS 552 - History of Rhetorical Theory

Communication and Rhetorical Studies
3 credit(s) Irregularly
Overview of a variety of theories, from ancient to contemporary, and the factors that affect concepts of rhetoric in the culture of Western thought. Permission of instructor

## CRS 553 - American Public Address

Communication and Rhetorical Studies
3 credit(s) Irregularly
Public address as an influence in the political, social, legal, and religious history of America.
Permission of instructor

## CRS 567 - Rhetoric and Philosophy

Communication and Rhetorical Studies
3 credit(s) Irregularly
Examines the quarrel between philosophy and rhetoric and the way it has affected the development of Western thought. Permission of instructor

CRS 568 - Rhetoric of Social Change

## Communication and Rhetorical Studies

3 credit(s) Irregularly
Through a critical examination of public discourses, the student's critical understanding of the scope and function of rhetoric will be enhanced. Permission of instructor

## Setnor School of Music

## Applied Music

AMC 500 - Selected Topics

Setnor School of Music
1-6 credit(s)

## AMC 525 - Keyboard Skills

## Setnor School of Music

2 credit(s) Upon sufficient interest
Sight reading. Score reading. Transposition. Basic ensemble techniques. Two-piano and four-hand repertoire emphasized. Permission of instructor.

## AMC 526 - Technq of Accompaniment

## Setnor School of Music

2 credit(s) Upon sufficient interest Case studies in collaborative repertoire with strings, winds, and voice. Ensemble techniques: leading, following, balance. Performance of orchestral material from score and reduction: opera, concertos.
PREREQ: AMC 525

## AMC 540-Opera Workshop

## Setnor School of Music

0-1 credit(s) Every semester
Primarily for students in voice. Experience in conducting, coaching, accompanying, acting, directing, and stage management in the preparation and presentation of operas. Scenes from various operas and one full-length opera. Repeatable

## AMC 545 - Diction in Singing

## Setnor School of Music

2 credit(s) At least $1 x$ fall or spring Basic phonetics (International Phonetic Alphabet). Enunciation in the foreign languages most frequently encountered in vocal and choral literature (Italian, French, German, and Latin). English diction in singing. Additional work required for graduate credit.

AMC 546 - Diction in Singing<br>Setnor School of Music<br>2 credit(s) At least 1 x fall or spring

Basic phonetics (International Phonetic Alphabet). Enunciation in the foreign languages most frequently encountered in vocal and choral literature (Italian, French, German, and Latin). English diction in singing. Additional work required for graduate credit.

## AMC 547 - Advanced Diction for Singers

## Setnor School of Music

2 credit(s) At least $1 x$ fall or spring
The unique sounds of French, German, Italian, English, Russian and Spanish are explored through class performances along with review of the International Phonetic Alphabet.
PREREQ: AMC 546

## Bassoon

## BSN 160 - Bassoon/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BSN 165 - Bassoon/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## BSN 166 - Bassoon/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
BSN 260 - Bassoon/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BSN 265 - Bassoon/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## BSN 266 - Bassoon/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
BSN 360 - Bassoon/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

BSN 365 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
BSN 366 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
BSN 369 - Bassoon/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
BSN 460 - Bassoon/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
BSN 465 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## BSN 466 - Bassoon/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
BSN 469 - Bassoon/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
BSN 560 - Bassoon/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
BSN 565 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
BSN 566 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Tuba

BTB 150 - Tuba/Non Music Majors
Setnor School of Music
$1-4$ credit(s) Every semester

For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BTB 155 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## BTB 156 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## BTB 250 - Tuba/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BTB 255 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## BTB 256 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## BTB 350 - Tuba/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BTB 355 - Tuba/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
BTB 356 - Tuba/Music Majors
Setnor School of Music
1-4 credit(s) Every semester For music students.

## BTB 359 - Tuba/Perform Honors

Setnor School of Music
1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

## BTB 450 - Tuba/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BTB 455 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## BTB 456 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## BTB 459 - Tuba/Perform Honors

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## BTB 550 - Tuba/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## BTB 555 - Tuba/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
BTB 556 - Tuba/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Clarinet

CLR 140 - Clarinet/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## CLR 145 - Clarinet/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## CLR 146 - Clarinet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## CLR 240 - Clarinet/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## CLR 245 - Clarinet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
CLR 246 - Clarinet/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
CLR 340 - Clarinet/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## CLR 345 - Clarinet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
CLR 346 - Clarinet/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
CLR 349 - Clarinet/Perform Honors
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## CLR 440 - Clarinet/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
CLR 445 - Clarinet/Music Majors
Setnor School of Music
1-4 credit(s) Every semester For music students.

CLR 446 - Clarinet/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## CLR 449 - Clarinet/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## CLR 540 - Clarinet/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## CLR 545 - Clarinet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## CLR 546 - Clarinet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## Conducting

## CTG 545 - Basic Conducting

Setnor School of Music
2 credit(s) Every semester
Baton technique: beat patterns, tempo indication, preparation and release, style, dynamics, cueing and eye contact.

## CTG 546 - Intermediate Conducting Choral

## Setnor School of Music

2 credit(s)
Hand techniques. Vocal music techniques. Score analysis. Warm-ups. Choral literature. Elements of ensemble performance.
PREREQ: CTG 545

## CTG 548 - Intermediate Conducting,

 Instrumental
## Setnor School of Music

2 credit(s) At least 1x fall or spring
Hand techniques. Instrumental music techniques.
Score analysis. Warm-ups. Instrumental literature.
PREREQ: CTG 545

## Double Bass

DBS 140 - Double Bass/Non Mus Major

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## DBS 145 - Double Bass/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
DBS 146 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester For music students.

UNDERGRADUATE COURSE CATALOG

DBS 240 - Double Bass/Non Mus Major

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
DBS 245 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
DBS 246 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
DBS 340 - Double Bass/Non Mus Major

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
DBS 345 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
DBS 346 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## DBS 349 - Double Bass/Perform Honor

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
DBS 440 - Double Bass/Non Mus Major

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
DBS 445 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
DBS 446 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

DBS 449 - Double Bass/Perform Honor
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
DBS 540 - Double Bass/Non Mus Major

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
DBS 545 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
DBS 546 - Double Bass/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Drumset

DRS 110 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For non-music students.
Repeatable 1 time(s), 4 credits maximum

DRS 115 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For music students.
DRS 116 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For music students.
DRS 210 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For non-music students.
Repeatable 1 time(s), 4 credits maximum
DRS 215 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For music students.
DRS 216 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For music students.

DRS 310 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For non-music students.
Repeatable 1 time(s), 4 credits maximum
DRS 315 - Drumset Instruction
Setnor School of Music
1-2 credit(s)
For music students.

## DRS 316 - Drumset Instuction

## Setnor School of Music

1-2 credit(s)
For music students.

## DRS 410 - Drumset Instruction

Setnor School of Music 1-2 credit(s)
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## DRS 415 - Drumset Instruction

Setnor School of Music
1-2 credit(s)
For music students.

## DRS 416 - Drumset Instruction

## Setnor School of Music

1-2 credit(s)
For music students.

## Ensemble (Chamber Music)

ENC 510 - Chamber Music Mixed

## Setnor School of Music

$0-1$ credit(s) Every semester
Repeatable

## ENC 520 - Chamber Music/Piana

Setnor School of Music
$0-1$ credit(s) Every semester
Repeatable
ENC 530 - Chamber Music/Strings
Setnor School of Music
0-1 credit(s) Every semester
Repeatable
ENC 540 - Chamber Music/Woodwinds
Setnor School of Music
0-1 credit(s) Every semester
Repeatable

## ENC 550 - Chamber Music/Brass

Setnor School of Music
0-1 credit(s) Every semester

ENC 560 - Chamber Music/Percussion
Setnor School of Music
0-1 credit(s) Every semester Repeatable, 8 credits maximum

## Ensemble (Instrumental)

## ENI 470 - Experience Credit

Setnor School of Music
1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

## ENI 510 - Large Bands

Setnor School of Music
0-1 credit(s) Every semester Repeatable

## ENI 520 - Small Bands

Setnor School of Music
0-1 credit(s) Every semester Repeatable

## ENI 530 - Reading Band

Setnor School of Music
0-1 credit(s) Irregularly
Repeatable
ENI 540 - University Orchestra
Setnor School of Music
0-1 credit(s) Every semester Repeatable

## ENI 550-Small Orchestra

Setnor School of Music
0-1 credit(s) Irregularly
Repeatable

## ENI 560 - Reading Orchestra

Setnor School of Music
0-1 credit(s) Irregularly
Repeatable

## Ensemble (Vocal)

ENV 510 - Large Chorus
Setnor School of Music
0-1 credit(s) Every semester Repeatable

ENV 520 - Small Chorus
Setnor School of Music
$0-1$ credit(s) Every semester Repeatable

ENV 530 - Reading Chorus
Setnor School of Music
0-1 credit(s) Irregularly Repeatable

ENV 540 - Hendricks Chapel Choir
Setnor School of Music
0-1 credit(s) Every semester
Repeatable

## Euphonium

EUP 130 - Euphonium/Non Mus Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
EUP 135 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
EUP 136 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
EUP 230 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
EUP 235 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
EUP 236 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

EUP 330 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

EUP 335 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
EUP 336 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

## EUP 339 - Performance Honors in Euphonium

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
EUP 430 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
EUP 435 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

EUP 436 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
EUP 439 - Performance Honors in Euphonium
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## EUP 530 - Euphonium Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
EUP 535 - Euphonium Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## EUP 536 - Euphonium Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## French Horn

## FHN 120 - French Horn Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
FHN 125 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FHN 126 - French Horn Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FHN 220 - French Horn Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students. Repeatable 1 time(s), 4 credits maximum

FHN 225 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FHN 226 - French Horn Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FHN 320 - French Horn Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students. Repeatable 1 time(s), 4 credits maximum

FHN 325 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
FHN 326 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
FHN 329 - Performance Honors in French Horn

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## FHN 420 - French Horn Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
FHN 425 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
FHN 426 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
FHN 429 - Performance Honors in French Horn

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
FHN 520 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
FHN 525 - French Horn Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FHN 526 - French Horn Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Flute

FLT 110 - Flute Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students. Repeatable 1 time(s), 4 credits maximum

## FLT 115 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FLT 116 - Flute/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## FLT 210 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## FLT 215 - Flute Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## FLT 216 - Flute Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## FLT 310 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## FLT 315 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FLT 316 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FLT 319 - Performance Honors in Flute

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## FLT 410 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## FLT 415 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FLT 416 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
FLT 419 - Performance Honors in Flute
Setnor School of Music
1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

UNDERGRADUATE COURSE CATALOG

FLT 510 - Flute Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## FLT 515 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## FLT 516 - Flute Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Guitar

GTR 071 - Classical Guitar Performance Seminar

## Setnor School of Music

0 credit(s) Every semester
Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation.
COREQ: GTR 165 AND MHL 071

## GTR 072 - Classical Guitar Performance Seminar

## Setnor School of Music

0 credit(s) Odd academic yr e.g. 2007-8
Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation.
PREREQ: GTR 071
COREQ: GTR 166 AND MHL 072

## GTR 073 - Classical Guitar

## Performance Seminar

## Setnor School of Music

0 credit(s)
Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation. COREQ: GTR 265 AND MHL 073

## GTR 074 - Classical Guitar Performance Seminar

Setnor School of Music
0 credit(s)
PREREQ: GTR 073
COREQ: GTR 266 AND MHL 074

## GTR 075-Classical Guitar Performance Seminar <br> Setnor School of Music <br> 0 credit(s) <br> Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation. <br> COREQ: GTR 365 AND MHL 075 <br> GTR 076 - Classical Guitar <br> Performance Seminar <br> Setnor School of Music <br> 0 credit(s) <br> Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation. <br> PREREQ: GTR 075 <br> COREQ: GTR 366 AND MHL 076 <br> GTR 077 - Classical Guitar Performance Seminar <br> Setnor School of Music <br> 0 credit(s) <br> Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation. COREQ: GTR 465 AND MHL 077 <br> GTR 078-Classical Guitar Performance Seminar <br> Setnor School of Music <br> 0 credit(s) <br> Weekly performance opportunity for guitar majors. Focus on communication of musical thoughts and ideas and the relationship between a successful performance and its necessary preparation. <br> PREREQ: GTR 077 <br> COREQ: GTR 466 AND MHL 078

## GTR 160 - Classical Guitar Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
GTR 165-Classical Guitar Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
GTR 166-Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## GTR 260 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## GTR 265 - Classical Guitar Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## GTR 266 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## GTR 360 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## GTR 365 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## GTR 366 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## GTR 369 - Performance Honors in Classical Guitar <br> Setnor School of Music <br> 1-4 credit(s) Every semester <br> Repeatable 1 time(s), 4 credits maximum

## GTR 460 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## GTR 465 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## GTR 466 - Classical Guitar Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## GTR 469 - Performance Honors in Classical Guitar

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
GTR 521 - Survey of Classical Guitar History and Literature

## Setnor School of Music

3 credit(s) Odd academic yr e.g. 2007-8
For majors and non-majors. The history of the classical guitar, from 1487 to the present, devoted to guitar composers/performers and their musical works examined in historical, aesthetic and social contexts.

GTR 522 - Classical Guitar Fingerboard Harmony

Setnor School of Music
3 credit(s)
GTR 523 - Transcribing and Arranging for Classical Guitar

Setnor School of Music
3 credit(s)
GTR 524 - Classical Guitar Pedagogy
Setnor School of Music
3 credit(s)
GTR 560 - Classical Guitar Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
GTR 565-Classical Guitar Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
GTR 566 - Classical Guitar Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Harpsichord

HPD 130 - Harpsichord Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## HPD 135 - Harpsichord Instruction

Setnor School of Music
1-4 credit(s) Every semester

For music students.

## HPD 136 - Harpsichord Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
HPD 230 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
HPD 235 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
HPD 236 - Harpsichord Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
HPD 330 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students. Repeatable 1 time(s), 4 credits maximum

HPD 335 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
HPD 336 - Harpsichord Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
HPD 339 - Performance Honors in Haprsichord
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
HPD 430 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
HPD 435 - Harpsichord Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

HPD 436 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
HPD 439 - Performance Honors in Haprsichord

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
HPD 530 - Harpsichord Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## HPD 535 - Harpsichord Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
HPD 536 - Harpsichord Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Harp

HRP 150 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
HRP 155 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## HRP 156 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
HRP 250 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## HRP 255 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## HRP 256 - Harp Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## HRP 350 - Harp Instruction

## Setnor School of Music

1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## HRP 355 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## HRP 356 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## HRP 359 - Performance Honors in Harp

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
HRP 450 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## HRP 455 - Harp Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## HRP 456 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## HRP 459 - Performance Honors in Harp

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## HRP 550 - Harp Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## HRP 555 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

HRP 556 - Harp Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Music History and Literature

MHL 071 - Weekly Student Convocation, Freshman

Setnor School of Music
0 credit(s) Every semester
MHL 072 - Weekly Student Convocation, Freshman

Setnor School of Music
0 credit(s) Every semester
MHL 073 - Weekly Student Convocation, Sophomore

Setnor School of Music
0 credit(s) Every semester
MHL 074 - Weekly Student Convocation, Sophomore

Setnor School of Music
0 credit(s) Every semester
MHL 075 - Weekly Student
Convocation, Junior
Setnor School of Music
0 credit(s) Every semester
MHL 076 - Weekly Student
Convocation, Junior
Setnor School of Music
0 credit(s) Every semester
MHL 077 - Weekly Student
Convocation, Senior
Setnor School of Music
0 credit(s) Every semester
MHL 078 - Weekly Studnt Convocation
Setnor School of Music
0 credit(s) Every semester
MHL 167 - Introduction to Music History

Setnor School of Music
3 credit(s) At least 1x fall or spring
Crosslisted with: HOM 167
Introduction to music history, focusing on the
European and American concert repertoire.

MHL 168 - History of European Music before 1750

Setnor School of Music
3 credit(s) At least 1x fall or spring
European music before 1750 in its cultural and philosophical contexts. Extensive listening. Analytical focus on selected composers and works. Presupposes familiarity with musical notation, terms, and contexts.

## MHL 185 - Introduction to World Music

## Setnor School of Music

3 credit(s)
Crosslisted with: HOM 285
Introduction to world music in its social, political, and cultural contexts, with an emphasis on building listening and analytic skills. Intended primarily for music and music history and culture majors.

MHL 267 - European Music from 17501914

## Setnor School of Music

3 credit(s) At least 1x fall or spring Crosslisted with: HOM 267
European music from 1750 to 1914 in its cultural and philosophical contexts. Extensive listening. Analytical focus on selected composers and works. Presupposes familiarity with musical notation, terms and concepts.

## MHL 268 - European and American

 Music Since 1914
## Setnor School of Music

3 credit(s) At least 1x fall or spring
Crosslisted with: HOM 268
Major trends and figures in art music in the United States and Europe since 1914. Topics include nationalism, neoclassicism, serialism, indeterminacy, and minimalism. Assumes basic knowledge of music.

## MHL 364 - History of American Popular Music

## Setnor School of Music

3 credit(s) At least $1 x$ fall or spring
Double Numbered with: MHL 664
Consideration of popular music in its changing
cultural contexts. Social, psychological and political issues raised by successive genres. Additional work required of graduate students.

## MHL 365 - History of Rock Music

## Setnor School of Music

3 credit(s) Irregularly
A chronological survey course, studying the elements of rock music and its sociological implications.

## MHL 380 - International Course

## Setnor School of Music

1-12 credit(s) Upon sufficient interest Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## MHL 466 - History of Jazz

## Setnor School of Music

3 credit(s) At least 1x fall or spring Chronological survey. Roots of jazz through the present.

## MHL 499 - Honors Capstone Project

## Setnor School of Music

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## MHL 500 - Selected Topics

## Setnor School of Music

1-6 credit(s) Upon sufficient interest
Selected aspect of music history or literature.
Content and method of instruction may vary for each workshop.
Repeatable

## MHL 525 - Survey of Keyboard Literature: $\mathbf{1 6 5 0}$ to 1850

## Setnor School of Music

3 credit(s) Odd academic yr e.g. 2007-8 Historical survey of literature now performed on the piano, focusing on significant repertoire from 1650 to 1850 through performance, listening, and research.

## MHL 526 - Survey of Keyboard Literature: $\mathbf{1 8 5 0}$ to Present

## Setnor School of Music

3 credit(s) Odd academic yr e.g. 2007-8 Historical survey of literature now performed on the piano, focusing on significant repertoire from ca. 1850 to the present through performance, listening, and research.

## MHL 535-Orchestral Repertoire:

 1600-1800
## Setnor School of Music

2 credit(s)
A comprehensive study of orchestral repertoire from 1600-1800. J. S. Bach to early Beethoven. Score analysis, composer biographies, cultural context and critical listening.

## MHL 545 - Aspects of Repertoire Preparation

## Setnor School of Music

2 credit(s) At least $1 x$ fall or spring For instrumentalists, singers, pianists. Aspects of repertoire preparation; repertoire planning, score preparation, stylistic performance practice, harmonic listening, working in an ensemble, and stage presence. Learning theory and current performance psychology techniques.

## MHL 546 - Vocal Literature

## Setnor School of Music

3 credit(s) Odd academic yr e.g. 2007-8
For pianists and singers. Historical survey of art song repertoire through performance, listening, and research.
PREREQ: MHL 545

## MHL 547 - Vocal Literature II

## Setnor School of Music

3 credit(s) At least 1x fall or spring For singers/pianists. Continuation of MHL 546; students will use musical/literary research methods to prepare/perform song literature from the Western classical music canon. PREREQ: MHL 546

## MHL 548 - Instrumental Literature

Setnor School of Music
3 credit(s) Even Academic Yr e.g. 2004-5
For pianists and instrumentalists. Historical survey of major chamber music repertoire through performance, listening, and research.

## MHL 557 - Survey of Choral Literature I

## Setnor School of Music

2 credit(s) Odd academic yr e.g. 2007-8
A survey of predominantly western sacred choral literature from the Renaissance to present, focusing on masses, requiems, motets and anthems.
PREREQ: MHL 267

## MHL 558 - Survey of Choral Literature II

Setnor School of Music
2 credit(s) Odd academic yr e.g. 2007-8
A survey of predominantly western sacred choral literature from the Renaissance to present, focusing on oratorios, passions, cantatas, other large sacred works, choral symphonies, vocal chamber music, world music, and spirituals. PREREQ: MHL 267 AND MTC 246

## MHL 560 - The Concert Experience

## Setnor School of Music

3 credit(s) Irregularly
Repeatable

## MHL 566 - Topics in Music Literature and Analysis

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Crosslisted with: MTC 566
Intensive focus on a composer, genre or stylistic development, to be chosen by the instructor.
Emphasis on analytical understanding, aesthetic issues and interdisciplinary context.
Repeatable 2 time(s), 12 credits maximum

## MHL 567 - Choral Literature

## Setnor School of Music

2 credit(s) Irregularly
An overview of the major choral forms (e.g. motet, madrigal, oratorio), leading composers of choral music, and style periods from 1500 to the present. Emphasis on score study and listening. PREREQ: MHL 266

## MHL 568 - Choral Literature for Elementary and Secondary Choirs

## Setnor School of Music

2-3 credit(s) At least $1 x$ fall or spring Examination of choral repertoire for elementary and secondary school settings. Strategies for teachers to discriminate between examples of quality choral literature through musical analysis and the examination of suitable historical contexts and musical cultures.

## MHL 578 - Charles Ives: an American Original

## Setnor School of Music

3 credit(s) Irregularly
A presentation designed to acquaint the student with the musical and personal characteristics that produced the unique phenomenon in American music that is Charles Ives. In-depth study of his musical and literary work.

## MHL 590 - Independent Study

## Setnor School of Music

1-6 credit(s) Upon sufficient interest
Preparation of a project paper under guidance
of a member of the appropriate faculty, who introduces student to tools of research. Presented for reading and grading to a group of three faculty, one of whom is the advisor.
Repeatable

## Music Theory

## MTC 051 - Composition Seminar, Freshman

## Setnor School of Music

0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest
presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 052 - Composition Seminar, Freshman

## Setnor School of Music

0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 053 - Composition Seminar, Sophomore

Setnor School of Music
0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 054 - Composition Seminar, Sophomore

Setnor School of Music
0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 055 - Composition Seminar, Junior

## Setnor School of Music

0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 056 - Composition Seminar, Junior

## Setnor School of Music

0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 057 - Composition Seminar, Senior

## Setnor School of Music

0 credit(s)
Listening and discussion of creative issues and
strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 058 - Composition Seminar, Senior

## Setnor School of Music

0 credit(s)
Listening and discussion of creative issues and strategies in music composition. Two \& four guest presentations by visiting composers per semester. Required of all undergraduate composition majors.

## MTC 125 - Introductory Music Theory

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Crosslisted with: HOM 125
Elementary harmony, form and counterpoint
through writing and listening. For non-majors and music theatre majors only.

## MTC 126 - Introductory Music Theory

## Setnor School of Music

3 credit(s) At least 1x fall or spring Elementary harmony, form and counterpoint through writing and listening. For non-majors and music theatre majors only.
PREREQ: MTC 125

## MTC 145 - Diatonic Harmony I

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Music fundamentals. Elementary counterpoint. Basic principles of diatonic harmony, voice leading and analysis. All diatonic triads and their inversions. Primarily for music majors.

## MTC 146 - Diatonic Harmony II

## Setnor School of Music

3 credit(s) At least $1 x$ fall or spring
Diatonic harmony and voice leading continued.
Seventh chords. Nonharmonic tones. Common chord modulation. Melody harmonization. Analysis of music literature.
PREREQ: MTC 145

## MTC 147 - Ear Training I

## Setnor School of Music

1 credit(s) At least 1x fall or spring
Sight singing with diatonic melodies. Rhythmic reading and dictation with simple and compound meter. Melodic and harmonic dictation using all diatonic triads and their inversions.

## MTC 148 - Ear Training II

## Setnor School of Music

1 credit(s) At least 1x fall or spring
Sight singing with diatonic melodies continued.

Rhythmic reading and dictation with triplet subdivisions, hemiola, and syncopation. Melodic and harmonic dictation using seventh chords and non-harmonic tones.
PREREQ: MTC 147

## MTC 155-Composition I

## Setnor School of Music

1-2 credit(s) Every semester
Introductory composition. Exploration of contemporary compositional methods, emphasizing solo works and works for small ensembles. Open to students with evidence of previous compositional experience. Required of music students planning to major in composition. Permission of instructor

## MTC 156-Composition I

## Setnor School of Music

1-2 credit(s) Every semester
Introductory composition. Exploration of contemporary compositional methods, emphasizing solo works and works for small ensembles. Open to students with evidence of previous compositional experience. Required of music students planning to major in composition. Permission of instructor

## MTC 225 - Sight-singing for Non Music

 Majors I
## Setnor School of Music

1 credit(s)
Sight-singing; diatonic melodies, popular songs. Rhythmic reading and dictation with simple and compound meter. Melodic and harmonic dictation using all diatonic triads and their inversions. For non music majors only.
PREREQ: MTC 126

## MTC 226 - Sight-singing for Non Music Majors II

## Setnor School of Music

1 credit(s)
Continuation of MTC 225.
PREREQ: MTC 225

## MTC 245 - Chromatic Harmony I

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Chromatic harmony and voice leading. Secondary dominants, altered chords and all forms of modulation. Introduction to musical form. Analysis of repertoire through early 19th century. PREREQ: MTC 146

## MTC 246 - Chromatic Harmony II

## Setnor School of Music

3 credit(s) At least $1 x$ fall or spring
Chromatic harmony continued. Late 19th century chromaticism, 20th century methods. Analysis of
repertoire from 19th and 20th centuries.
PREREQ: MTC 245

## MTC 247 - Ear Training III

## Setnor School of Music

1 credit(s) At least 1x fall or spring
Sight singing melodies with chromatic alterations and modulation. Rhythmic reading and dictation with quintuplet and septuplet subdivisions. Melodic and harmonic dictation using secondary dominants, altered chords and modulation. PREREQ: MTC 148

## MTC 248 - Ear Training IV

## Setnor School of Music

1 credit(s) At least 1x fall or spring
Sight singing and dictation with highly chromatic and nontonal melodies. Rhythmic reading and dictation with complex meter and changes in meter. Melodic and harmonic dictation using nontonal harmony.
PREREQ: MTC 247

## MTC 255 - Composition II

## Setnor School of Music

1-2 credit(s) At least $1 x$ fall or spring Continuation of Composition I. Primarily for students planning to major in composition. PREREQ: MTC 155 AND MTC 156

## MTC 256 - Composition II

## Setnor School of Music

1-2 credit(s) At least 1x fall or spring Continuation of Composition I. Primarily for students planning to major in composition.
PREREQ: MTC 155 AND 156

## MTC 300 - Selected Topics

## Setnor School of Music

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MTC 355 - Composition III

## Setnor School of Music

1-4 credit(s) Every semester
Advanced composition with emphasis on larger forms and works for larger ensembles. Open only to composition majors.
PREREQ: MTC 155 AND MTC 156 AND MTC 255 AND MTC 256

## MTC 356 - Composition III

## Setnor School of Music

1-4 credit(s) Every semester
Advanced composition with emphasis on larger forms and works for larger ensembles. Open only to composition majors.

PREREQ: MTC 155 AND MTC 156 AND MTC 255 AND MTC 256

## MTC 380 - International Course

## Setnor School of Music

1-12 credit(s)
Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript. Repeatable

## MTC 400 - Selected Topics

## Setnor School of Music

1-6 credit(s) Upon sufficient interest Exploration of topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## MTC 410 - Undergraduate Teaching Experience

## Setnor School of Music

$0-2$ credit(s)
Students teach help sections of undergraduate theory classes. Meet with professor to discuss pedagogy and techniques. Register for one credit for each two hours with students. Does not satisfy upper division theory elective requirement.
PREREQ: MTC 246 AND MTC 248
Repeatable 2 time(s), 3 credits maximum

## MTC 417 - Instrumentation

## Setnor School of Music

2 credit(s) Irregularly
Ranges and idiomatic uses of band and orchestral instruments. Elementary scoring for band and orchestra with reference to typical instrumental groups available in schools.

## MTC 418 - Choral Arranging

## Setnor School of Music

2 credit(s) Irregularly
Ranges and idiomatic uses of wind, percussion, and string instruments in bands and orchestras and of voices in choral ensembles and choirs. Elementary scoring for choral combination instrumental and choral groups.

## MTC 455 - Composition IV

## Setnor School of Music

2-4 credit(s) Every semester
Preparation of works sufficient in scope and technical advancement for senior recital. Open to senior composition majors.

## MTC 456 - Composition IV

## Setnor School of Music

2-4 credit(s) Every semester
Preparation of works sufficient in scope and technical advancement for senior recital. Open to senior composition majors.

## MTC 499 - Honors Capstone Project

## Setnor School of Music

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## MTC 500 - Workshop In Music Theory

## Setnor School of Music

1-3 credit(s) Upon sufficient interest Selected aspect of music theory. Content and method of instruction may vary for each workshop. Repeatable 1 time(s), 6 credits maximum

## MTC 535-Orchestration

## Setnor School of Music

3 credit(s) Odd academic yr e.g. 2007-8
Scoring for individual instruments and small ensembles. Analysis of selected instrumental compositions.
PREREQ: MTC 246

## MTC 540 - Survey of Basic Theory

## Setnor School of Music

1-3 credit(s) At least $1 x$ fall or spring
Review of music fundamentals, tonal harmony, and aural skills. Entering graduate students failing written portion of theory diagnostic exam attend classes on fundamentals and harmony. Those failing aural skills portion attend ear training classes. Passing this course satisfies diagnostic exam requirements. Not applicable to any degree.

## MTC 545 - Counterpoint

## Setnor School of Music

3 credit(s) Upon sufficient interest
Grounding in species counterpoint and 16thcentury practice, moving into a comprehensive study of contrapuntal techniques through the 20th century.
PREREQ: MTC 246

## MTC 546 - Analysis of Contemporary Music

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Twentieth-century compositional methods, analysis of selected works. Introduction to 12tone set theory.
PREREQ: MTC 246

## MTC 550 - Composition

## Setnor School of Music

1-2 credit(s) Every semester
For students not majoring in composition.
Permission of instructor

## MTC 551 - Songwriting

## Setnor School of Music

3 credit(s) At least $1 x$ fall or spring
A comprehensive approach to the craft of popular songwriting. Analysis includes historical perspectives, song form, style, content, lyric writing, lead sheet and demo creation, copyright, recording, and marketing techniques.

## MTC 552 - Studio Arranging

## Setnor School of Music

3 credit(s) Irregularly
Scoring and arranging for film, video, and recording. Popular genres. Miking, mixing, overdubbing, studio effects, synchronization with visual media.
PREREQ: MTC 535

## MTC 554 - Jazz Composing and Arranging

## Setnor School of Music

3 credit(s) Upon sufficient interest Jazz theory. Scoring with standard and nonstandard instrumental voicings. Preparation of charts for big band and smaller ensembles. PREREQ: MTC 535

## MTC 555 - Jazz Improvisation I

## Setnor School of Music

1 credit(s) Every semester
Beginning jazz theory; simple harmonic functions. Improvisation with Ionian, Dorian, and Mixolydian modes. Arranging for small ensembles. Permission of instructor.

## MTC 556 - Jazz Improvisation II

## Setnor School of Music

1 credit(s) Every semester
Improvisation with II to V progressions, diminished chords, augmented triads, and related scales. Composing and arranging for small ensembles. PREREQ: MTC 555

## MTC 557 - Jazz Improvisation III

## Setnor School of Music

1 credit(s) Every semester
Improvisation with half-diminished seventh chord and related scale. Application of improvisational techniques to pop and jazz tunes. Recordings and transcriptions of major artists. Preparation of charts for larger ensembles.
PREREQ: MTC 556

## MTC 558- Jazz Improvisation IV

## Setnor School of Music

1 credit(s) Every semester
Improvisation with pentatonic and Iydian scales and turn-around patterns. Improvisational principles using chord scales, guide tones, and other techniques. Preparation of charts for larger ensembles.
PREREQ: MTC 557

## MTC 560 - Electronic Music Composition

## Setnor School of Music

3 credit(s) Every semester
Introduction to techniques, repertoire, and history of electroacoustic/computer generated music. Projects include three compositions for electronic sounds; electronics alone, with soloist, and with small ensemble. Required course for music composition majors.
Repeatable

## MTC 562 - Performing with Computers

## Setnor School of Music

3 credit(s) Irregularly
An exploration of techniques for live performance with computers: interactive, multimedia, installation, DJ and others, using a broad array of software and hardware combinations, focusing on their actual and potential creative uses.

## MTC 566 - Topics in Music Literature and Analysis

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Crosslisted with: MHL 566
Intensive focus on a composer, genre or stylistic development, to be chosen by the instructor. Emphasis on analytical understanding, aesthetic issues and interdisciplinary context. Repeatable 2 time(s), 12 credits maximum

## MTC 590 - Independent Study

## Setnor School of Music

1-6 credit(s) Upon sufficient interest Preparation of a project paper under guidance of a member of the appropriate faculty, who introduces the student to tools of research. Presented for reading and grading to a group of three faculty, one of whom is the advisor.

## Music Education

## MUE 115 - Technology in Music Education

## Setnor School of Music

2 credit(s)
Examines technology in music education. Computer hardware and software for notation,
sequencing, multimedia, computer-assisted instruction, database, and sound editing are discussed. Provides practical understanding of music instrument digital interface, audio, video, Internet navigation, and web page design.

## MUE 215 - Foundations of Music Education

## Setnor School of Music

3 credit(s) At least 1 x fall or spring Philosophy of music teaching. Professional activities and organizations. Current trends. Career opportunities. Personal/professional competency of model teachers. Analysis of prospective teacher's personal/professional goals and competency.

## MUE $\mathbf{3 0 0}$ - Selected Topics

## Setnor School of Music

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MUE 310 - Field Experience in Music Education

## Setnor School of Music

1-2 credit(s) Every semester
Double Numbered with: MUE 610
Orientation to school settings: organization, services, guidance, goals, evaluation. Observations and supervised teaching experiences in music at elementary/secondary levels. Experiences coordinated with music education courses in sophomore/junior years and graduate teacher preparation program. Additional work required of graduate students.
PREREQ: MUSIC EDUCATION MAJOR
Repeatable 1 time(s), 2 credits maximum

## MUE 321 - Teaching of Voice for Schools

## Setnor School of Music

1-2 credit(s) At least $1 x$ fall or spring Double Numbered with: MUE 621 Laboratory in teaching voice, emphasizing performance techniques, care of vocal instrument, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper-division status or permission of instructor.

## MUE 325 - Teaching of String Instruments

## Setnor School of Music

1-2 credit(s) At least $1 x$ fall or spring
Double Numbered with: MUE 625
Laboratory in string instruments, emphasizing
performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstrations of methods and materials for individual/group instruction. Upper-division status or permission of instructor.
Repeatable 1 time(s), 4 credits maximum

## MUE 326 - Teaching of Brass Instruments

## Setnor School of Music

1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 626
Laboratory in brass instruments, emphasizing performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper-division status or permission of instructor.
Repeatable 1 time(s), 4 credits maximum

## MUE 327 - Teaching of Woodwind Instruments I

## Setnor School of Music

1-2 credit(s) At least 1 x fall or spring Double Numbered with: MUE 627 Laboratory in flute, clarinet, and saxophone, emphasizing performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper-division status or permission of instructor.

## MUE 328 - Teaching of Woodwind Instruments II

## Setnor School of Music

1-2 credit(s) At least 1x fall or spring Double Numbered with: MUE 628 Laboratory in oboe and bassoon, emphasizing performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper-division status or permission of instructor.

## MUE 333 - Music in the Elementary School

## Setnor School of Music

1-2 credit(s) At least $1 x$ fall or spring Double Numbered with: MUE 633 Methods and materials for elementary school music programs. Laboratory experience in teaching songs, rhythms, music listening, sight reading, and the use of visual aids. Orff and Kodaly methods.
PREREQ: MINIMUM JUNIOR STANDING

## MUE 334 - Methods and Materials in General Music

Setnor School of Music
1-2 credit(s) At least 1 x fall or spring Double Numbered with: MUE 634
Methods and resources for grades 6-12 in nonperformance music classes. History, theory, general music. The changing voice. Upper-division status or permission of instructor.

## MUE 400 - Selected Topics

## Setnor School of Music

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MUE 415 - Jazz Ensemble Techniques

## Setnor School of Music

2 credit(s)
Double Numbered with: MUE 617

## MUE 416 - Psychological and Sociological Aspects of Music

## Setnor School of Music

2-3 credit(s) Irregularly
Introduction to psychophysiological and sociophysiological processes involved in musical behavior. For non-music majors: permission of instructor.

## MUE 423 - Teaching of Percussion Instruments

## Setnor School of Music

1-2 credit(s) At least $1 x$ fall or spring Double Numbered with: MUE 623 Laboratory in percussion instruments, emphasizing performance techniques, care of instruments, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper-division status or permission of instructor.

## MUE 431 - Mngmt in Music Teaching

## Setnor School of Music

1-2 credit(s) At least 1 x fall or spring Double Numbered with: MUE 731

## MUE 435 - Choral Rehearsal Techniques

## Setnor School of Music

2-3 credit(s) At least $1 x$ fall or spring Double Numbered with: MUE 735
Principles and techniques of conducting and rehearsing choral groups. Music literature for typical choral group in schools.

## MUE 437 - Instrumental Rehearsal Techniques in Music Education

## Setnor School of Music

2-3 credit(s) At least $1 x$ fall or spring Double Numbered with: MUE 737 Principles and techniques of conducting and rehearsing instrumental groups. Music literature for typical instrumental groups in schools.

## MUE 499 - Honors Capstone Project

## Setnor School of Music

1-3 credit(s) Every semester
Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## MUE 510 - Practicum in Children's Choir

## Setnor School of Music

1-3 credit(s)
Develop understanding, expertise, and practical experience working with a children's choir through score analysis, rehearsal observations, and conducting experiences. In-depth study of choral music appropriate for children's choirs of varying levels.

## MUE 516 - Technology in Music Education

## Setnor School of Music

3 credit(s)
Philosophical foundation for marching bands. Lecture/lab format promoting discussion and practical application of skills necessary to organize, administer, and implement the high school band program successfully.

## MUE 518 - Marching Band Techniques

## Setnor School of Music

2 credit(s) At least 1x fall or spring Philosophical foundation for marching bands. Lecture/lab format promoting discussion and practical application of skills necessary to organize, administer, and implement the high school band program successfully. Music education majors or permission of instructor.

## MUE 520-Teaching of Classical Guitar

## Setnor School of Music

1-2 credit(s)
Laboratory in guitar, emphasizing performance techniques, care of instrument, acoustical considerations, elementary ensemble performance, and practical demonstration of methods and materials for individual/group instruction. Upper division status or permission of instructor. Music majors only.

## Music Industry

## MUI 010 - Soyars Entertainment Leadership Lecture Series I

## Setnor School of Music

0 credit(s)
Features music industry leaders from the highest levels of business. These visiting faculty members will focus, in depth, on cutting edge issues as they relate to leadership in today's industry.
Repeatable 6 time(s)

## MUI 103 - Music Industry Forum

## Setnor School of Music

0 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 104 - Music Industry Forum

## Setnor School of Music

0 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 106 - Survey of the Music Industry

## Setnor School of Music

2 credit(s) At least 1x fall or spring Creative and business aspects of industry. Historical/sociological aspects, recording, songwriting, publishing, copyright, performing rights, mechanical rights, performing artist, record companies, production, marketing, merchandising, mass media, and industry hardware.

## MUI 200 - Selected Topics

## Setnor School of Music

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## MUI 203 - Music Industry Forum

## Setnor School of Music

0 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.
Repeatable

## MUI 204 - Music Industry Forum

## Setnor School of Music

0 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 205 - Music Industry I

## Setnor School of Music

3 credit(s) Every semester
Historical, creative, sociological, and business aspects of music publishing, artist management, concert promotion, rights and licensing, agencies, unions and guilds, roles of creative and supporting professionals in each area. Music industry major or permission of instructor.

## MUI 206 - Music Industry II

Setnor School of Music
3 credit(s) Every semester
Historical, creative, sociological, and business aspects of the recording industry, music management, arts advocacy, and concert music. Roles of creative and supporting professionals in each area. Music industry major or permission of instructor.
PREREQ: MUI 205

## MUI 301 - Record Production

## Setnor School of Music

3 credit(s)
The aesthetic and creative aspects of the record producer's role in crafting hits in collaboration with artist and repertoire personnel and the audio engineering team. Includes critical listening, the art of recording and the associated technologies and overviews of the creative process.

## MUI 303-Music Industry Forum

Setnor School of Music
1 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 304 - Music Industry Forum

## Setnor School of Music

1 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 305 - Music Industry and the Media

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Articles, advertising, and the media in public relations. Role of the artist, public relations representative, advertising company executive, and program director. Application of communication skills to professional tasks.
PREREQ: MUI 205 AND MUI 206

## MUI 307 - Studio Recording

## Setnor School of Music

3 credit(s) At least 1x fall or spring Theoretical, practical and creative aspects of current audio engineering practices. Recording studio design and acoustics, microphone theory, digital recording, mixing, editing and mastering. Extensive experience working in a modern music recording studio.

## MUI 308 - Live Sound and Concert Recording

## Setnor School of Music

3 credit(s) At least 1x fall or spring
Fundamentals and techniques of live sound recording. Acoustics and microphone placement. Editing, mastering duplication, and packaging. Emphasis on recording concert music. Recording and archival projects.
PREREQ: MUI 307

## MUI 309 - Studio Acoustics

## Setnor School of Music

3 credit(s) At least 1x fall or spring Music studio acoustics; quantities and units; principles of sound propagation; sound absorption; psychological acoustics; noise measurement; and specification; and specification of sound insulation.
PREREQ: MAT 295 AND PHY 211

## MUI 310 - Soyars Leadership Lecture Series

## Setnor School of Music

1 credit(s)
Double Numbered with: MUI 610
Features music industry leaders from the highest levels of the business. These visiting faculty members will focus, in depth, on cutting edge issues as they relate to leadership in today's industry. Additional work required of graduate students.
Repeatable 7 time(s), 8 credits maximum

## MUI 320 - Syracuse University Recordings

## Setnor School of Music

1-3 credit(s)

Students operate university-owned music enterprises; producing and releasing recorded music; booking and promoting concerts, publishing and managing artists, etc. The structures of comparable commercial entities are examined. Permission of instructor. Repeatable 3 time(s), 9 credits maximum

## MUI 321 - Concert Recording I

## Setnor School of Music

2 credit(s) At least $1 x$ fall or spring
Fundamental concepts of live concert recording and sound reinforcement.

## MUI 322 - Concert Recording II

## Setnor School of Music

2 credit(s) At least 1 x fall or spring
Advanced concepts of live concert recording and sound reinforcement.

## MUI 400 - Selected Topics

## Setnor School of Music

1-6 credit(s) Upon sufficient interest Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## MUI 402 - Current State of the Music Industry

## Setnor School of Music

2 credit(s) Every semester
Assigned projects requiring individual preparation and presentation. Emphasis on the current state of the music industry with implications for the future. Projects require interaction with local experts and national leaders.
PREREQ: MUI 205 AND MUI 206 AND MUI 305 AND MUI 405 AND SENIOR LEVEL

## MUI 403 - Music Industry Forum

## Setnor School of Music

1 credit(s) Every semester New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 404 - Music Industry Forum

## Setnor School of Music

1 credit(s) Every semester
New ideas, problems, issues, and trends are presented and discussed by scholars, local experts, and national leaders in the music industry. Music industry major or permission of instructor.

## MUI 405 - Music Industry Law and Ethics

## Setnor School of Music

3 credit(s) Every semester
Legal aspects of music industry. Ethical considerations for management and artists. Study of domestic and international copyrights, contracts, labor agreements, conflicts of interest, licensing, trade practice regulations, mechanical rights, taxation, privacy, piracy, and payola. Music industry major or permission of instructor. PREREQ: MUI 205 AND MUI 206

## MUI 406 - Topics in Music Industry

## Setnor School of Music

2 credit(s) Every semester
Intensive focus on a problem, issue or trend to be chosen by the instructor. Emphasis on technological developments, international music markets, and arts advocacy. Music industry major or permission of instructor.
PREREQ: MUI 205 AND MUI 206 AND MUI 305 AND MUI 405 AND SENIOR LEVEL

## MUI 408 - Music Industry Practicum

## Setnor School of Music

1-5 credit(s) Every semester
Supervised music industry field experience in which a student's performance is measured against previously stated set of objectives and goals. Permission of Instructor.
PREREQ: MUI 205 AND MUI 206
Repeatable 2 time(s), 5 credits maximum

## MUI 409 - Advanced Digital Audio Workstation Production

## Setnor School of Music

3 credit(s) Every semester
Expoloration of current audio workstation technology. Advanced recording, editing and mixdown in a studio and portable setting. Emphasis on systems design and implementation based on current computing technology.
PREREQ: MUI 307

## MUI 411 - Recording Studio Management I

## Setnor School of Music

2 credit(s) At least 1x fall or spring Fundamental concepts of recording studio management, training and maintenance.

## MUI 412 - Recording Studio Management II

Setnor School of Music
2 credit(s) At least $1 x$ fall or spring Advanced concepts of recording studio management, training and maintenance. PREREQ: MUI 411

## MUI 414 - Music Technology Practicum

## Setnor School of Music

2 credit(s) At least 1x fall or spring
Supervised capstone recording project.

## MUI 499 - Honors Capstone Project

## Setnor School of Music

1-3 credit(s) Upon sufficient interest Completion of an Honors Capstone Project under the supervision of a faculty member. Repeatable 2 time(s), 3 credits maximum

## Oboe

## OBO 130-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## OBO 135-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester For music students.

## OBO 136-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## OBO 230-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## OBO 235-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester For music students.

## OBO 236-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## OBO 330-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## OBO 335-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## OBO 336 - Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## OBO 339 - Performance Honors in Oboe

Setnor School of Music
1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

## OBO 430-Oboe Instruction

Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## OBO 435-Oboe Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## OBO 436-Oboe Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## OBO 439 - Performance Honors in Oboe

Setnor School of Music
1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

## OBO 530-Oboe Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students. Repeatable 1 time(s), 4 credits maximum

## OBO 535-Oboe Instruction

Setnor School of Music
1-4 credit(s) Every semester For music students.

OBO 536-Oboe Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Organ

ORG 110-Organ Instruction
Setnor School of Music
1-4 credit(s) Every semester For non-music students.
Repeatable 1 time(s), 4 credits maximum

## ORG 115-Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
ORG 116-Organ Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

ORG 210-Organ Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## ORG 215-Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
ORG 216-Organ Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

ORG 310-Organ Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## ORG 315-Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
ORG 316 - Organ Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## ORG 319 - Performance Honors in Organ

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## ORG 410-Organ Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## ORG 415-Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## ORG 416-Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
ORG 419 - Performance Honors in Organ

## Setnor School of Music

1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

ORG 510-Organ Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## ORG 515-Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## ORG 516 - Organ Instruction

Setnor School of Music
1-4 credit(s) Every semester For music students.

## Pedagogy of Theory

PDG 519 - Vocal Pedagogy
Setnor School of Music
2 credit(s) At least $1 x$ fall or spring Voice science: structure of the vocal tract, acoustics, special equipment. Voice building: breath management, positioning of vocal tract, registration, placement, voice types, exercises. Laboratory experience. Four semesters of applied voice.

## PDG 520 - Piano Pedagogy Workshop

Setnor School of Music
1 credit(s) Irregularly
Philosophy and psychology in piano teaching through analysis and performance of elementary and secondary materials. Music by recognized composers.

## PDG 522 - Vocal Pedagogy II

## Setnor School of Music

2 credit(s) At least 1x fall or spring
Reinforcement of concepts and literature introduced in PDG 519. Emphasises appropriate song/operatic literature used in teaching voice, hands-on teaching non-voice majors. Introduction to Voce Vista and pedagogical technology. PREREQ: PDG 519

## PDG 527 - Piano Pedagogy

## Setnor School of Music

2 credit(s) Irregularly
Philosophies and psychology of piano teaching.
Materials for beginning and intermediate students in both individual and class teaching. Additional work required of graduate students.

## PDG 530 - Workshop in Teaching of Strings

## Setnor School of Music

1-2 credit(s) Irregularly
Principles, methods, and problems associated with teaching string instruments to young people individually and in groups.
Repeatable

## PDG 538 - Violin Pedagogy

## Setnor School of Music

1 credit(s) Irregularly
Violin teaching: lecture on procedure for both class and individual instruction, attendance and observation at regular class meetings, and practical teaching by pedagogy students.

## Piano

## PNO 120 - Piano Instruction

## Setnor School of Music

1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## PNO 121 - Keyboard Skills I

## Setnor School of Music

1 credit(s) Every semester Development of technique and proficiency; to strengthen theory, ear training, and keyboard harmony skills. Placement audition.

## PNO 122-Keyboard Skills I

## Setnor School of Music

1 credit(s) Every semester
Development of technique and proficiency; to strengthen theory, ear training, and keyboard harmony skills. Placement audition.

## PNO 125 - Piano Instruction

Setnor School of Music
1-4 credit(s) Every semester For music students.

## PNO 126 - Piano Instruction

## Setnor School of Music

1-4 credit(s) Every semester For music students.

## PNO 220 - Piano Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
PNO 221 - Keyboard Skills II

## Setnor School of Music

1 credit(s) Every semester
Development of technique and proficiency; to strengthen theory, ear training, and keyboard harmony skills. Placement audition.

## PNO 222 - Keyboard Skills II

## Setnor School of Music

1 credit(s) Every semester
Development of technique and proficiency; to strengthen theory, ear training, and keyboard harmony skills. Placement audition.

## PNO 225 - Piano Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
PNO 226 - Piano Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
PNO 320 - Piano Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PNO 325 - Piano Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
PNO 326 - Piano Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
PNO 329 - Performance Honors in Piano

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## PNO 420 - Piano Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PNO 425 - Piano Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## PNO 426 - Piano Instruction

## Setnor School of Music

1-4 credit(s) Every semester For music students.

## PNO 429 - Piano/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## PNO 520 - Performance Honors in Piano

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PNO 525 - Piano Instruction

Setnor School of Music
1-4 credit(s) Every semester For music students.

## PNO 526 - Piano Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Percussion

PRC 110 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PRC 115 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
PRC 116 - Percussion Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

## PRC 210 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PRC 215 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## PRC 216 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## PRC 310 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## PRC 315 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## PRC 316 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## PRC 319 - Performance Honors in Percussion

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## PRC 410 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PRC 415 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## PRC 416 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## PRC 419 - Performance Honors in Percussion

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## PRC 510 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester

For non-music students.
Repeatable 1 time(s), 4 credits maximum

## PRC 515 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
PRC 516 - Percussion Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## Recording and Allied Entertainment

## RAE 300 - Selected Topics

Setnor School of Music
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

## RAE 404 - Social Media for the Music Business

Setnor School of Music
3 credit(s) At least $1 x$ fall or spring
The objective of this course is to provide exposure to the use and management of social media, including strategies for applying social media to the promotion, distribution and sale of music and entertainment.

RAE 408 - Entertainment Industry Practicum

## Setnor School of Music

1-3 credit(s) At least 1 x fall or spring
Supervised Entertainment Industry field
experience in which a student's performance is measured against a previously stated set of objectives and goals.
Repeatable 5 time(s), 18 credits maximum
RAE 411 - Global Commerce and Law for the Music Entertainment Industry

## Setnor School of Music

3 credit(s) At least 1x fall or spring
A global overview of music industry law for entertainment business students. Issues, treaties, court cases, contracts and the mechanics of international commerce.

## RAE 444 - Law for The Music \& Entertainment Industries

## Setnor School of Music

3 credit(s) At least 1 x fall or spring
Introduction to music and entertainment industry law. Students study the legal role in recording,
publishing, artist management, live music, licensing for film/tv.

## RAE 470 - Experience Credit

## Setnor School of Music

1-6 credit(s)
Participation in a discipline or subject related experience. Student must be evaluated by written or oral reports or an examination. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.

## RAE 490 - Independent Study

## Setnor School of Music

1-6 credit(s)
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable

## RAE 499 - Honors Capstone Project

Setnor School of Music
1-3 credit(s)
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable

## RAE 500 - Selected Topics

Setnor School of Music
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## RAE 501 - Reconciling Arts and Commerce: Arts Entrepreneurship

## Setnor School of Music

3 credit(s) At least $1 x$ fall or spring
Campus-wide offering for arts-oriented students. Explores the balance between the creative process and commercial realities. Insight on marketing, networking and self-promotion strategies. Permission of instructor.

## RAE 505 - Entertainment Industry Exploration

## Setnor School of Music

1-3 credit(s) At least $1 x$ fall or spring Each student determines their own personalized path of learning in a structured mentored academic environment with an emphasis on any and all aspects of the entertainment industry. Repeatable 3 time(s), 12 credits maximum

## Recorder

## RDR 120 - Recorder Instruction

Setnor School of Music
1-4 credit(s) Every semester For non-music students.

RDR 125 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
RDR 126 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## RDR 220 - Recorder Instruction

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.

## RDR 225 - Recorder Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
RDR 226 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

RDR 320 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.

## RDR 325 - Recorder Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## RDR 326 - Recorder Instruction

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
RDR 329 - Performance Honors in Recorder

Setnor School of Music
1-4 credit(s) Every semester
RDR 420 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester For non-music students.

## RDR 425 - Recorder Instruction

Setnor School of Music
1-4 credit(s) Every semester
For music students.
RDR 426 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester For music students.

RDR 429 - Performance Honors in Recorder

Setnor School of Music
1-4 credit(s) Every semester
RDR 520 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
RDR 525 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.
RDR 526 - Recorder Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Saxophone

SXP 150 - Saxophone/Non Music Maj
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
SXP 155 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## SXP 156 - Saxophone/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
SXP 250 - Saxophone/Non Music Maj
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
SXP 255 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester

For music students.

## SXP 256 - Saxophone/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## SXP 350 - Saxophone/Non Music Maj

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
SXP 355 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester For music students.

## SXP 356 - Saxophone/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## SXP 359 - Saxophone/Perform Honors

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## SXP 450 - Saxophone/Non Music Maj

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
SXP 455 - Saxophone/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## SXP 456 - Saxophone/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
SXP 459 - Saxophone/Perform Honors
Setnor School of Music
1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

SXP 550 - Saxophone/Non Music Maj
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
SXP 555 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester

## UNDERGRADUATE COURSE CATALOG

For music students.
SXP 556 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Trombone

## TRB 140 - Trombone/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
TRB 145 - Trombone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
TRB 146 - Trombone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRB 240 - Trombone/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## TRB 245 - Trombone/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
TRB 246 - Trombone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
TRB 340 - Trombone/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
TRB 345 - Trombone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
TRB 346 - Trombone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester

For music students.
TRB 349 - Trombone/Perform Honors
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## TRB 440 - Trombone/Non Music Majors

Setnor School of Music 1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
TRB 445 - Trombone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRB 446 - Trombone/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRB 449 - Trombone/Perform Honors

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
TRB 540 - Trombone/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
TRB 545 - Trombone/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRB 546 - Trombone/Music Major

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Trumpet

## TRP 110 - Trumpet/Non Music Majors

Setnor School of Music 1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## TRP 115 - Trumpet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRP 116 - Trumpet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRP 210 - Trumpet/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
TRP 215 - Trumpet/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## TRP 216 - Trumpet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRP 310 - Trumpet/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
TRP 315 - Trumpet/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## TRP 316 - Trumpet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## TRP 319 - Trumpet/Perform Honors

## Setnor School of Music

1-6 credit(s) Every semester Repeatable 1 time(s), 6 credits maximum

## TRP 410 - Trumpet/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## TRP 415 - Trumpet/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## TRP 416 - Trumpet/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## UNDERGRADUATE COURSE CATALOG

## TRP 419 - Trumpet/Perform Honors

Setnor School of Music
1-6 credit(s) Every semester
Repeatable 1 time(s), 6 credits maximum
TRP 490 - Independent Study
Setnor School of Music
1-6 credit(s) Irregularly
Exploration of a problem, or problems, in depth.
Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and department. Repeatable

TRP 510 - Trumpet/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## TRP 515 - Trumpet/Music Major

Setnor School of Music
1-6 credit(s) Every semester
For music students.
TRP 516 - Trumpet/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For music students.

## Violoncello

## VCO 130 - Cello/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students. Repeatable 1 time(s), 4 credits maximum

VCO 135-Cello/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VCO 136 - Cello/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VCO 230 - Cello/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
VCO 235-Cello/Music Majors
Setnor School of Music
1-4 credit(s) Every semester For music students.

VCO 236 - Cello/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
VCO 330 - Cello/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
VCO 335 - Cello/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
VCO 336 - Cello/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
VCO 339 - Cello/Perform Honors
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum
VCO 430 - Cello/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VCO 435 - Cello/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
VCO 436 - Cello/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.
VCO 439 - Cello/Perform Honors
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## VCO 530 - Cello/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VCO 535 - Cello/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

VCO 536 - Cello/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Viola

## VLA 120 - Viola/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLA 125 - Viola/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## VLA 126 - Viola/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## VLA 220 - Viola/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## VLA 225 - Viola/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VLA 226 - Viola/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## VLA 320 - Viola/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLA 325 - Viola/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## VLA 326 - Viola/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## VLA 329 - Viola/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

## VLA 420 - Viola/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLA 425 - Viola/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## VLA 426 - Viola/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For music students.

## VLA 429 - Viola/Perform Honors

Setnor School of Music
1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

## VLA 520 - Viola/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLA 525 - Viola/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VLA 526 - Viola/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Violin

## VLN 110 - Violin/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## VLN 115 - Violin/Music Majors

Setnor School of Music
1-4 credit(s) Every semester For music students.

## VLN 116 - Violin/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VLN 210 - Violin/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum
VLN 215 - Violin/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
VLN 216 - Violin/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VLN 310 - Violin/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLN 315 - Violin/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.
VLN 316 - Violin/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.
Repeatable

## VLN 319 - Violin/Perform Honors

Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## VLN 410 - Violin/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLN 415 - Violin/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VLN 416 - Violin/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For music students.

VLN 419 - Violin/Perform Honors
Setnor School of Music
1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## VLN 510 - Violin/Non Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VLN 515 - Violin/Music Major

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## VLN 516 - Violin/Music Major

Setnor School of Music
1-4 credit(s) Every semester
For music students.

## Voice

VOC 110 - Voice/Non Music Major
Setnor School of Music
1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## VOC 115 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For performance majors.

## VOC 116 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For performance majors.

## VOC 210 - Voice/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VOC 215 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For performance majors.

## VOC 216 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For performance majors.

## UNDERGRADUATE COURSE CATALOG

## VOC 310 - Voice/Non Music Major

## Setnor School of Music

1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## VOC 315 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For performance majors.

## VOC 316 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For performance majors.

## VOC 319 - Voice/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester
Repeatable 1 time(s), 4 credits maximum

## VOC 410 - Voice/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For non-music students. Repeatable 1 time(s), 4 credits maximum

## VOC 415 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester For performance majors.

## VOC 416 - Voice/Music Major

## Setnor School of Music

1-4 credit(s) Every semester
For performance majors.

## VOC 419 - Voice/Perform Honors

## Setnor School of Music

1-4 credit(s) Every semester Repeatable 1 time(s), 4 credits maximum

## VOC 499 - Honors Capstone Project

Setnor School of Music
1-3 credit(s) Upon sufficient interest
Completion of an Honors Capstone Project under the supervision of a faculty member.
Repeatable 2 time(s), 3 credits maximum

## VOC 510 - Voice/Non Music Majors

## Setnor School of Music

1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

## VOC 515 - Voice/Music Majors

## Setnor School of Music

1-4 credit(s) Every semester

For performance majors.

## VOC 516 - Voice/Music Majors

Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

## VOC 520 - Vocal Coaching

Setnor School of Music
1-2 credit(s) Every semester
Private coaching of vocal repertoire for singers and pianists. Music majors only.
Repeatable 7 time(s), 16 credits maximum

## College of Visual and Performing Arts Faculty

James S. Abbott, Professor of Practice; Sound Recording Technology Program
B.M., University of Miami School of Music, 1992

Sound Recording Engineering
Yasser Aggour, Associate Professor
M.F.A., Yale University, 1999

Art Photography
Edward Aiken, Associate Professor Ph.D., Northwestern University, 1981 Art History, Museum Studies

Janet H. Ambrose, Associate Professor
M.A., Syracuse University, 1990

Textile Design
Richard Balestra, Part-time Instructor
M.M., Ithaca College, 1992

Jazz Guitar
Kyle Bass, Part-time Instructor
M.F.A., Goddard College, 2006

Playwriting, Theater History
Cooper Battersby, Assistant Professor
M.F.A., University of Illinois at Chicago, 2003

Art Video TRM core/selected topics
Kathleen Baum, Part-time Instructor
M.F.A., Syracuse University, 2000

Movement-based Theater, Meyerhold's Theatrical Biomechanics

Peter Beasecker, Associate Professor
M.F.A., Alfred University, 1987

Ceramics
Sharif Bey, Assistant Professor
Ph.D., Pennsylvania State University Art Education

Martha Blake, Assistant Professor
M.F.A, Syracuse University

Illustration
Muriel Bodley, Part-time Instructor
M.M., SUNY Potsdam Crane School of Music Music Education

David Bowman, Part-time Instructor
B.F.A., Syracuse University, 1993

Lighting Design, Theater Technology
Cornelia Brewster, Part-time Instructor M.M., University of Wisconsin-Madison, 1965

Flute
Janet Brown, Professor of Practice
M.M., Syracuse University, 1993

Voice, Baroque Ensemble
Yvonne Buchanan, Assistant Professor
B.F.A., Parsons School of Design, 1977

Illustration
Michael Bull, Part-time Instructor M.M., Syracuse University, 1977

Percussion, Percussion Ensemble
Robert Bundy, Assistant Professor
MFA, University of California, San Diego
Acting, Directing
Deette Bunn, Part-time Instructor
M.M., University of Washington, 1982

Harp
Don Buschmann, Part-time Instructor
M.A., Southwest Missouri State University, 1977

Advanced Practicum in Stage Management
Richard W. Buttny, Professor
Ph.D., University of Massachusetts, 1983
Intercultural Communication, Language, and Social Interaction

José Peppie Calvar, Assistant Professor; Assistant Director, Choral Activities
D.M.A., University of South Carolina, 2012

Hendricks Chapel Choir
Elizabeth Carioti, Part-time Instructor
B.S., Syracuse University, 2011

Music and Entertainment Industries
Donald Carr, Professor
M.F.A., Cranbrook Academy of Art, 1992

Industrial and Interaction design
Edward Castilano, Part-time Instructor
M.M., Syracuse University, 2003

Double Bass
Carla Cesare, Assistant Professor
Ph.D., University of Northumbria, 2013
Design History
Bonnie Choi, Part-time Instructor
D.M.A., University of Michigan, 1993

Harpsichord, Piano, Piano Class
Brian Cimmet, Assistant Professor
B.A., Wesleyan University

Musical Theater
Gerardine Clark, Laura J. and L. Douglas Meredith
Professor
Ph.D., Indiana University, 1977
Acting, Directing, Dramatic Literature, Play Analysis
James Clark, Professor
M.A., Indiana University, 1971

Theater Management, Theater as a Profession

Ann Clarke, Associate Professor M.F.A., Rhode Island School of Design, 1994 Fiber Arts
Dana Cloud, Professor
Ph.D., The University of Iowa, 1992
Communication and Rhetorical Studies
Felix Cochren, Associate Professor
Carnegie-Mellon Univeristy
Design/Technical Theater
Jill Coggiola, Part-time Instructor; Assistant
Director for Academic Affairs
D.M., Florida State University, 1994

Clarinet, Music Education
John Coggiola, Associate Professor; Director, Jazz Studies
Ph.D. Florida State University, 1997
Jazz Studies, Jazz Ensemble, Music Education,
Music Cognition, Music Technology
Michael Coldren, Part-time Instructor
M.M., Arizona State University, 1988

Tuba, Euphonium
Diana Coles, Part-time Instructor
M.A., University of Missouri, Kansas City, 1967

Theater Management
Jan Cohen-Cruz, Professor
Ph.D., New York University, 1994
Drama
Todd Conover, Associate Professor
B.S., Syracuse University, 1995

Fashion Design
Robert Cooney, Associate Professor
B.F.A., Syracuse University, 1972

Communications Design
Kelly Covert, Part-time Instructor
M.M., Ithaca College

Flute
Leo Crandall,Part-time Instructor
B.A., University of Illinois at Chicago

Museum Studies
Stephen Cross, Associate Professor
M.F.A., Dell'Arte International School of Physical

Theatre
Movement for Actors
Deborah Cunningham, Part-time Instructor
M. Mus. Ed.; M.M., Syracuse University, 2004; 1994
Music Education
Susan D'Amato, Associate Professor
M.F.A., University of North Carolina at Chapel Hill,

2000
Drawing
Robert Dacey, Professor
B.F.A., Art Center College, Los Angeles, 1975

Drawing, Illustration
Michele Damato, Assistant Professor
M.S., Pratt Institute

Communications Design
Gretchen Darrow-Crotty, Part-time Instructor
University of Connecticut, 1995
Costume and Design Technology
Timothy Davis-Reed, Assistant Professor
B.F.A., Syracuse University, 1985

Acting
Elisa Dekaney, Associate Professor; Chair, Department of Music Education
Ph.D. Florida State University, 2001
Music Education, Concert Choir, Brazilian Ensemble

Joshua Dekaney, Part-time Instructor; Director, Career Development Center
M.M., University of Missour-Kansas City, 1998

Drumset, Jazz Drumset, Jazz Combos, Jazz
Improvisation, Brazilian Ensemble, Music Education

William DiCosimo, Assistant Professor M.M., University of Southern California, 1976

Music Industry, Jazz Studies, Music Industry
Dana DiGennaro, Part-time Instructor
M.M., Mannes School of Music, 1992

Flute
Gabriel DiMartino, Part-time Instructor
M.M., Wichita State University, 2008

Trumpet
Emily Dittman, Part-time Instructor
M.A, M.S., Syracuse University

Museum Studies
Deborah Dohne, Associate Professor
M.F.A., Ohio State University, 1990

Dimensional Arts, Sculpture
Marion Dorfer, Associate Professor
M.F.A, Syracuse University, 1992

Surface Pattern Design
Joseph Downing, Associate Professor
D.M., Northwestern University, 1985

Composition, Music Theory
Boryana Dragoeva, Assistant Professor
Ph.D., Rensselaer Polytechnic Institute
Bio-Art, Experimental Film and Video Art,
Performance Art
Michael Dubaniewicz, Part-time Instructor
D.M.A., Eastman School of Music, 2009

Jazz Saxophone
Doug DuBois, Associate Professor
M.F.A., San Francisco Art Institute, 1988

Photography
Craig Dudczak, Associate Professor
PhD.D., University of Kansas, 1984
Communication and Rhetorical Studies
Zorana Dunham, Assistant Professor
BFA Interior Design Syracuse University Interior Design

Dennis Earle, Assistant Professor

Masters Architecture U of PA - Pitt Interior Design

Jonathan English, Part-time Assistant Professor M.M., Eastman School of Music, 1984

Voice
Bradley P. Ethington, Professor; Director, University
Bands
D.M.A., University of Texas at Austin, 1995

Conducting, Wind Ensemble
James Fathers, Professor; Iris Magidson Endowed
Chair of Design Leadership Chair
PhD.D., University of Wales, 2012
Design
Kathleen Feyh, Assistant Professor
Ph.D., University of Texas at Austin, 2012
Communication and Rhetorical Studies
Steven Frank, Part-time Instructor
M.M., Youngstown State University, 1978

Music Education
Melissa Gardiner, Part-time Instructor
M.M., The Julliard School, 2010

Jazz Trombone
Jon Garland, Part-time Instructor
B.M., The Julliard School, 1995

Horn
Jeff Glendenning, Assistant Professor
B.F.A., Syracuse University

Communications Design
Daniel S. Godfrey, Professor
Ph.D., University of lowa, 1982
Composition, Music Theory
Sharon Gold, Associate Professor
B.F.A., Pratt Institute of Technology, 1976

Drawing, Painting, Art Theory
Jeffrey Good, Assistant Professor
Ph.D., University of California, Los Angeles, 2009
Conversation Analysis, Discourse Analysis
Eileen Gosson, Assistant Professor
B.F.A., Syracuse University, 1984

Surface Pattern Design
Holly Greenberg, Associate Professor
M.F.A., The School of the Art Institute of Chicago,

1994
Printmaking
Lynn Greenky, Assistant Professor
J.D., Emory University School of Law, 1982

Argumentation and Advocacy, Legal
Communication
Diane Grimes, Associate Professor
Ph.D., Purdue University, 1996
Organizational Communication
Eric A Gustafson, Part-time Instructor Viola
Kathleen Haddock, Part-time Instructor
M.M., Boston University, 1981

Piano, Vocal Coaching, Opera Workshop

Rachel Hall, Associate Professor
Ph.D., University of North Carolina at Chapel Hill, 2004
Communication and Rhetorical Studies
Bob Halligan Jr., Part-time Instructor
B.A., Hamilton College, 1975

Songwriting
Michael Hanley, Part-time Instructor M.M., The Pennsylvania State University, 2013 Voice
Heath Hanlin, Associate Professor
M.F.A., Ohio State University, 1998

Computer Art
William Harris, Part-time Instructor M.M., Syracuse University, 1979

Trombone, Euphonium, Tuba
Andrew Havenhand, Assistant Professor M.F.A., Virginia Commonwealth University, 1984

Painting
Lucinda Havenhand, Associate Professor Ph.D., Virginia Commonwealth University, 2007
Interior Design, Design History
Lori Hawke, Assistant Professor
M.F.A., Syracuse University

Jewelry and Metalsmithing
Denise Heckman, Assistant Professor
M.F.A., Cranbrook Academy of Art, 1995

Industrial Design
Dusty Herbig, Associate Professor
M.F.A., University of Wisconsin, Madison, 2002

Printmaking
Kara Herold, Assistant Professor
M.F.A., San Francisco State University

Film
Jonathan Herter, Part-time Instructor
B.A., SUNY Geneseo

Sound Design
Amy Heyman, Part-time Instructor M.M., University of Wisconsin-Madison, 1986

Piano, Piano Class
Laura Heyman, Associate Professor
M.F.A., Cranbrook Academy of Art, 1998

Photography
Steven Heyman, Associate Professor; Chair, Department of Applied Music and Performance M.M., Julliard School of Music, 1982

Piano
David Hicock, Part-time Instructor B.F.A., Syracuse University, 1972

Film
Gail Hoffman, Part-time Assistant Professor M.F.A., Indiana University, 1980

2-D Creative Processes
Rodney S. Hudson, Assistant Professor M.A., University of South Dakota, 1973

Musical Theater Performance, Scene Study

Margie Hughto, Professor
M.F.A., Cranbrook Academy of Art, 1971

Ceramics
Elizabeth Ingram, Associate Professor
London Academy of Music and Dramatic Art, 1964
Voice, Acting, Scene Study
Malcolm Ingram, Associate Professor
Central School of Speech and Drama, London, 1963
Voice/Verse, Scene Study
Felix Ivanoff, Professor
Diploma, Central School of Speech and Drama, London, 1963
Voice/Verse, Scene Study
Christopher Jabot, Part-time Instructor
M.M., Syracuse University, 2013

Saxophone
Stephanie James, Professor
M.F.A., Newcastle University 1982

Art
Arthur D. Jensen, Professor
Ph.D., University of Massachusetts, 1982
Organizational Communication, Small Group
Communication
Eric Johnson, Associate Professor
M.M., Indiana University School of Music, 1983

Voice, Opera Workshop
Kenneth M. Johnson, Assistant Professor
Ph.D., University of Massachusetts, 1980
Interpersonal Communication, Research Methods
Patricia Johnson, Assistant Professor
M.A., Central Saint Martins College of Art and

Design, 2006
Design
Patrick M Jones, Professor
Ph.D., Pennsylvania State University, 2002
Music Education
Juan Juarez, Associate Professor
M.F.A., University of Wisconsin-Milwaukee

2-D Creative Process
Fred Karpoff, Professor
D.M.A., Peabody Conservatory of Music, 1992

Piano, Chamber Music, Vocal Coaching
Rebecca Karpoff, Assistant Professor
D.M.A., Eastman School of Music

Voice
Marie Kemp, Assistant Professor
M.F.A., M.Mus, Syracuse University, 1989

Musical Theater Performance, Scene Study
Amos Kiewe, Professor
Ph.D., Ohio University, 1984
Criticism, Public Address, Rhetoric
Alex Koziara, Associate Professor
M.F.A., SUNY at Purchase, 1998

Lighting and Set Design, CAD lab

Meggan C. Kulczynski, Part-time Instructor
M.F.A., North Carolina School of the Arts, 2000

Design and costume technology
Holly LaGrow, Part-time Instructor
B.S., Ball State University; Scenic Art Internship,

Juilliard School
Scene painting
Kevin Larmon, Assistant Professor
B.F.A., State University of New York at Binghamton,

1978
Painting
Anne Laver, Assistant Professor; University
Organist
D.M.A., Eastman School of Music, 2011

Organ
John Laverty, Professor
Ph.D., Florida State University, 1995
Music Theory, Music Industry
Victor Lazarow, Associate Professor
Ph.D., University of Georgia, 1978
Acting, Theater History, Play Analysis
Andrea Leigh-Smith, Assistant Professor Dance
Matthew "Zeke" Leonard, Assistant Professor M.F.A., Rhode Island School of Design, 2008

Design
Jude Lewis, Associate Professor
M.F.A., State University of New York at Albany, 1989
Sculpture, Dimensional Arts
David Lowenstein, Assistant Professor
B.F.A., Syracuse University, 1984

Musical theater
Patrick MacDougall, Part-time Instructor
Recording Engineering Program Degree - Dick
Grove School of Music, 1987
Sound Recording
Celia Madeoy, Assistant Professor
M.F.A., DePaul University, 1991

Drama
Gregory Marinic, Assistant Professor
M.Arch, University of Maryland

Interior Design
Maria Marrero, Professor
M.F.A., Rutgers University, 1977

Costume and Set Design, Stage Makeup
Roderick Martinez, Associate Professor
M.F.A., Rochester Institute of Technology, 1993

Communications Design
Daniel Mastronardi, Part-time Instructor
Music Industry
Jeffrey Mayer, Associate Professor
M.A., University of Connecticut, 1989

Fashion Design
Sarah McCoubrey, Professor
M.F.A., University of Pennsylvania, 1981

Drawing, Painting
Katherine McGerr, Assistant Professor
M.F.A., Yale School of Drama

## Drama

Julia McKinstry, Part-time Instructor
M.F.A., Carnegie Mellon University, 1981

## Voice

Judith Meighan, Associate Professor
Ph.D., Columbia University, 1997
Art History
Alexis Mendez, Assistant Professor
Film
Justin J. Mertz, Part-time Instructor; Assistant Director, University Bands; Director, Athletic Bands M.M., Syracuse University, 2003

Marching Band, Symphonic Band, Music Education

Kenneth Meyer, Part-time Instructor
D.M.A., Eastman School of Music, 2000

Guitar, Guitar Ensemble
Kathryn Miranda, Part-time Instructor
M.AmSAT, American Center for the Alexander

Technique, 1990
Alexander Technique
Richard Montalbano, Part-time Instructor Jazz Piano
Charles Morris III, Professor
Ph.D., Pennsylvania State University, 1998
Communication and Rhetorical Studies
Edward Morris, Professor of Practice Transmedia

Carmel Nicoletti, Adjunct
M.F.A., Syracuse University, 1986

Drawing, 2-D Creative Processes
Ulf Oesterle, Assistant Professor; Chair, Depart of
Music and Entertainment Industries
Ph.D., Syracuse University, 2007
Music and Entertainment Industries
William Padgett, Associate Professor
B.F.A., Washington University, 1970

Communications Pesign
Vasilios Papaioannu, Assistant Professor
M.F.A.

Film
JuneKyu Park, Assistant Professor
M.F.A., Syracuse University, 2015

Film
Kendall Phillips, Professor
Ph.D., Pennsylvania State University, 1995
Rhetoric, American film, Public Sphere
Alina Plourde, Part-time Instructor
D.M.A. University of Illinois, 2000

Oboe
Darryl Pugh, Part-time Instructor M.M, Eastman School of Music, 2000

Jazz Double Bass
Gregory Quick, Part-time Instructor
B.M., University of Michigan, 1976

Bassoon
Erin Rand, Assistant Professor
Ph.D., University of Iowa, 2006
Rhetoric, Social Movements, Gender and Queer Theory

James Ransome, Associate Professor
B.F.A., Pratt Institute, 1987

Illustration
John Raschella, Part-time Instructor
Artist Diploma, Curtis Institute of Music Trumpet

Sarah Gillen Redmore, Assistant Professor
B.F.A., Syracuse University, 1990

Interior Design
David M. Rezak, Professor of Practice; Director, Bandier Program
Music industry
Amardo Rodriguez, Laura J. and L. Douglass Meredith Professor
Ph.D., Howard University, 1995
Organizational Communication, Communication
Theory, Postcolonial Theory
Kathleen Roland-Silverstein, Assistant Professor
D.M.A., University of Southern California, 1997

Voice
James Rolling, Jr, Professor
Ed.D., Ed.M., Columbia University, Teachers
College
Art Education
Annina Ruest, Assistant Professor
M.F.A., University of California, San Diego

Computer Art and Animation
Julianna Sabol, Associate Professor
D.M.A., University of Cincinnati, 1992

Voice
Anthony Salatino, Associate Professor
B.F.A., Juilliard School, 1969

Ballet, tap, performance styles, movement
Andrew Saluti, Part-time Instructor
M.F.A., Louisiana State University, 2002

Drawing
Sarah Saulson, Part-time Instructor
B.A., Wellesley College, 1976

Fibers
Susannah Sayler, Assistant Professor
M.F.A., The School of Visual Arts

Art Photography
Nicolas Scherzinger, Associate Professor; Chair,
Department of Music Composition, Theory, and History
D.M.A., Eastman School of Music, 2001

Composition, Music Theory, Electronic Music
Ralf Schneider, Assistant Professor
M.Des., University of Cincinnati, 2005

Industrial and Interaction Design
Abel Searor, Part-time Instructor
M.M., Syracuse University, 2010

Piano Class
Owen Shapiro, Professor
M.F.A., Brooklyn College, 1966

Film, Media Theory
Tom Sherman, Professor
B.F.A, Eastern Michigan University, 1970

Video, Media Theory
Joanna Spitzner, Associate Professor
M.F.A., Ohio State University, 2001

Time Arts
Randall Steffen, Part-time Instructor M.F.A., Yale University

Technical Design and Production
Jeffrey Stockham, Part-time Instructor M.M., Eastman School of Music, 1982 Jazz Trumpet, Horn
Emily Stokes-Rees, Assistant Professor
DPhil, University of Oxford
Museum Studies
Miso Suchy, Associate Professor
M.F.A., Academy of Performing Arts, Bratislava, Czechoslovakia, 1990
Film
Barbara Tagg, Part-time Instructor
Ed.D., Syracuse University, 1997
Music Education, Women's Choir
James Tapia, Associate Professor; Director, Orchestral Activities
D.M.A., University of Texas at Austin, 1997

Orchestra, Conducting
John Thompson, Professor
B.F.A., Miami University of Ohio, 1962

Illustration, Painting
Ida Tili-Trebicka, Assistant Professor
M.M., Syracuse University, 1996

Piano, Piano Class
Nguyen Long-Nam To, Assistant Professor M.F.A.

Fashion Design
Samuel Van Aken, Associate Professor
M.F.A., University of North Carolina, Chapel Hill Sculpture
Karen Veverka, Part-time Instructor
M.M., Syracuse University, 1988

Violin
Emily Vey Duke, Associate Professor
M.F.A., University of Illinois at Chicago

Department of Transmedia, Art Video, TRM core/ selected topics
Andrew Waggoner, Professor
D.M.A., Cornell University, 1986

Composition, Music Theory

Barbara Walter, Professor
M.F.A., Northern Illinois University, 1977

Metalsmithing
David Wanstreet, Assistant Professor
B.S., West Virginia University, 1971

Musical Performance and Choreography
Matthew Warne, Part-time Instructor
Ph.D., Brown University, 2013
Music Theory
John Warren, Associate Professor; Director, Choral
Activities
D.M.A, University of Miami

University Singers, Hendricks Chapel Choir, Conducting, Choral Literature
Carolyn Weber, Part-time Instructor
M.Mus, Syracuse University, 1990

Voice
Jeffrey Welcher, Part-time Instructor,
M.M.E., West Chester University, 1982

Windjammer Vocal Jazz Ensemble, Jazz Voice,
Music Education
Joseph Whelan, Part-time Instructor
B.A., Empire State College

Theater History
Christopher Wildrick, Associate Professor
M.F.A., University of Wisconsin-Madison

2-D Creative Process
David Wilber, Part-time Instructor
M.S., Syracuse University, 1986

Music Education
Errol Willett, Associate Professor
M.F.A., Pennsylvania State University, 1993

Ceramics
Jerome P. Witkin, Professor
M.F.A., University of Pennsylvania, 1970

Painting, Drawing
Gregory Wood, Part-time Instructor
B.M., Cincinnati College, Conservatory of Music,

1978
Cello, String Chamber Ensembles
Robert Wysocki, Assistant Professor
M.F.A., Yale University, 1995

Sculpture
Rebecca Xu, Assistant Professor
M.F.A., Syracuse University

Computer Art
Stephen Zaima, Professor
M.F.A., University of California, Davis, 1971

Painting, Art Theory
Ralph Zito, Professor, Chair
A.B., Harvard University

Dialect, Text, Voice

# University College 

Bethaida Gonzalez, Dean
700 University Ave.
uc.syr.edu/

## About the College

University College (UC), is the home of part-time and summer studies at Syracuse University. UC offers a variety of credit and noncredit classes for part-time students during the fall and spring semesters, and for full-time, part-time, and visiting students during the summer. Part-time students receive Syracuse University degrees upon completion of their academic program.
UC also offers unique and valuable summer programs for high school students, administers educational programs for international students, is actively engaged in the University's commitment to serving veterans and their families, and enhances the local community through its continuing education and outreach programs. UC serves its constituents throughout their lifespan, engaging a spectrum of people from elementary school students to retired professionals, and enriching their lives by applying the knowledge and resources of a major university toward community issues and problems. University College acts as a bridge between the academic purposes of Syracuse University and the interests and needs of the community.

## Our Mission

To provide exceptional support and services for a diverse population seeking access to Syracuse University. To act as an entry point for students, an innovator of programs, a connector across campus disciplines, a builder of bridges to the community, and a partner for business.

## Undergraduate Programs

## Degrees

Part-time students earning a Syracuse University associate or bachelor's degree through University College may enroll for 11 or fewer credits each semester. Students have the option of taking day, evening, online, or flexible format classes, and have numerous choices in programs of study offered by the academic schools and colleges. Curriculums are the same for both part- and fulltime undergraduates. Click here for a complete listing of all degree programs available to parttime students.

Beginning in Fall 2014 and available only through University College is an innovative career-focused degree program - the Bachelor of Professional Studies (B.P.S.). This nontraditional program of
study, available fully online or in blended format, designed specifically for working adults, offers a Syracuse University degree, or a certificate, in either Creative Leadership or Knowledge Management. Both B.P.S. programs are expressly designed to prepare students for the demands of the current workplace and job market. An all-University faculty committee oversees the two degree programs, including policies and procedures.

## Certificates

Undergraduate certificate programs in Creative Leadership or Knowledge Management, available fully online or in blended format are offered as an option of the B.P.S. curriculum path. They are designed for working adults seeking an interim credential as they complete the B.P.S. degree or prefer a stand-alone certificate.

## General Regulations

For academic rules and regulations applying to all University students, see the Academic Rules section of this catalog, which also contains special regulations that apply to University College students. The regulations below apply to all students matriculated through University College for the Bachelor of Professional Studies degrees.

## Minimum Requirements for Degree

At least 120 credits of coursework are required for the B.P.S. degrees. To be eligible for graduation, B.P.S. students must attain a minimum grade point average (GPA) of 2.0 in courses taken at Syracuse University. Students must earn a grade point average of at least 2.0 in courses counted toward completion of their program of study.

## Minimum Requirements for Certificate

At least 15 credits of coursework are required for the certificates. To be eligible for graduation, certificate students must attain a minimum grade point average (GPA) of 2.0 in courses taken at Syracuse University. Students must earn a grade point average of at least 2.0 in courses counted toward completion of their certificate. Admission requires associate degree or 60 college credits.

## Declaring a Program of Study

B.P.S. students must declare a program of study by the time they have reached junior standing.

## Prior Learning Assessment for Bachelor of Professional Studies

Under the guidelines of the Council for Adult and

Experiential Learning (CAEL), University College recognizes that adult students may bring with them transfer credits from accredited American colleges and universities, credits from approved institutions in other countries, performance in college-level or proficiency examinations, and/or prior college-level learning gained from work and life experiences.
A maximum of 30 credits from the combination of advanced credit, prior learning assessment, and/ or credits earned through nontraditional programs may be applied toward the number of credits required for graduation. These credits may not be applied to the 30-credit residency requirement.
A maximum of 12 credits may be applied in the program of study.
Student must be matriculated in a B.P.S. program with junior standing to apply for prior learning assessment by developing a portfolio of prior college-level learning that identifies and documents the learning and how it applies to the individual's degree program. Further information is available from UC's Academic Advising Office, 315-443-3261.

## Transfer Credit Policy

Students who are matriculated in a B.P.S. degree program can earn up to 90 credits toward the 120 required for graduation through a combination of traditional transfer credit and prior learning assessment. A maximum of 66 lower-division credits may be transferred to an SU degree from a combination of testing programs and two-year college credits. A maximum of 90 credits may be granted from another four-year school. University College accepts a maximum of 12 transfer credits in the B.P.S. program of study.

## Bachelor of Professional Studies

Academic Director: Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-443-5890, adjensen@syr. edu

Program Questions, contact University College at 315-443-1317, or email parttime@uc.syr.edu
University College provides part-time students with personalized academic advising, financial aid, registration and bursar services. To find out how you can earn an SU degree part time or to begin by taking a course, attend an Information Session, call for an appointment with an academic advisor (315-443-3261), or e-mail parttime@uc.syr.edu. We'll get you started on the journey of a lifetime.
(*Matriculation: admission to a degree program. Required for graduation and financial aid.)

## Summer Programs

## Summer Sessions

- MAYmester - an intensive, two-week session
- Session I - six weeks (mid-May to late June)
- Session II - six weeks (early July to mid-August)
- Combined Session- 7- to 12-week session (mid-May to mid-August) \}
- Flex Format Sessions
o Long - Classes that meet equal to or more than 5 days

0 Short - meets equal to or less than 4 days
Attending summer sessions enables students to take courses they couldn't enroll in during other semesters. Additionally, students visiting from other colleges can, with permission from their home school, take courses at SU during the summer and transfer their credits to their own university.

The Summer Course Schedule is available at the beginning of March. Students may also search for classes in MySlice.

## Summer College for High School Students

High school students can take undergraduate courses, earn college credits, and explore potential majors while taking part in campus life through Summer College. Two-week, three-week, and six-week programs are available - some credit and some noncredit. For more information, contact the Summer College office, at 315-4435000 or sumcoll@syr.edu, or visit the web site.

## SummerStart

SummerStart is a six-week residential program that is specifically designed for incoming first-year students. The program is offered during Summer
Session II. Students may earn up to 7-9 credits toward their degree program, and become more familiar with the academic, social, and cultural life at SU. SummerStart helps to ease the transition into college, expands academic options, and affords students the opportunity to become a more self-assured and confident first-year student. For more information, contact the SummerStart office at 315-443-5045 or SUstart@syr.edu, or visit the web site.

## Student SUccess Initiative

The Student SUccess Initiative (SSUI) program is committed to the retention of students. In partnership with SU's schools and colleges, SSUI provides a comprehensive learning community experience that includes personal coaching,
quiet study areas, tutorials, and social activities. To qualify for the SSUI program, students must show some indication that they are academically "at risk" and are dedicated to making a change in their approach to academic and personal development. For more information, contact the SSUI office at 315-443-1095 or ssui@syr.edu, or visit the web site.

## English Language Institute

English Language Institute (ELI) courses are designed for international students and professionals who are interested in short-term or long-term study to improve their proficiency in English. Intensive courses are offered at six levels with an emphasis on academic English. Many of our students have been conditionally admitted to Syracuse University and are in need of additional English proficiency before enrolling in a degree program. Courses also can be tailored for discipline-specific study and a 6-w eek Legal English course supports students accepted for the LL.M. (Master of Laws). In addition, the ELI offers a 4-week general English course in the summer, as $w$ ell as other summer opportunities for high school students. Highly qualified instructors, a great deal of personal attention, and intensive exposure to English language instruction enable students to make the necessary progress. Enrollment is limited and admission is by application only.

For more information about the ELI, call 315-4438571 or visit the web site.

## Veterans Resource Center (VRC)

Veterans are a part of the thriving Syracuse University community. SU's Veterans Resource Center is dedicated to assisting prospective and current students as they navigate Veterans Affairs and University administration. The SU Veterans Lounge, staffed by fellow veterans, is a place where student-veterans make connections and share strategies and support while acclimating to college life. The Student Veterans Organization is a recognized student organization supported by the Veterans Resource Center. A chapter of the national S.A.L.U.T.E. honors society for veterans (salute.colostate.edu/) inducts Syracuse studentveteran members annually. Syracuse University's proud history of serving veterans dates back to World War II. We remain committed to supporting those who have served our country. For more information, call 315-443-9297 or visit our web site vrc.syr.edu.

## Arthur 0. Eve HEOP

The Arthur 0. Eve Higher Education Opportunity Program (HEOP) for part-time students, administered by University College, is designed for first-time college students and transfer students from other opportunity programs. It provides academic and financial support for people of all ages who, because of educational and economic circumstances, would otherwise be unable to attend college. This is the only HEOP program for students who can study on a part-time basis in New York State.
For more information on the HEOP program, call 315-443-3261 or visit the web site.

## Talent and Education Development Center (TEDCenter)

The TEDCenter is dedicated to improving the knowledge and capabilities of the existing and emerging workforce. The Center's professional development curriculum is noncredit and is designed to build competency for career growth in the region's critical business sectors. Classes are delivered in both classroom and online settings, many of which lead to an industry-recognized credential. Register for open enrollment programs or request a custom program at the TEDCenter web site.

For information, call 315-443-5241, or e-mail TEDCenter TEDCtr@syr.edu

## University College Honors

University College celebrates the accomplishments of those students who achieve extraordinary success in their studies with the following forms of recognition.

Alpha Sigma Lambda - Matriculated part-time candidates for the bachelor's degree may be invited to join Alpha Sigma Lambda, the national honor society for continuing education students, represented at SU by the Beta Delta chapter. To qualify, part-time students who have earned at least 24 credits, have maintained a 3.2 GPA, and are in the top 10-20\% of the class may be selected as initiates.
Dean's List - Matriculated part-time students enrolled at University College are selected for the dean's list at the end of the fall or spring semester, if they have enrolled in consecutive semesters with a total of 12 or more credits and earned a 3.4 GPA.

University Honors - Students who achieve superior cumulative GPAs are eligible to receive their degree with University Honors. This honor is based on a minimum of 60 credits of letter-graded

## UNDERGRADUATE COURSE CATALOG

classes taken at Syracuse University.
See the current issue of Academic Rules for a complete statement of University policies and requirements.

## Major

Creative Leadership, BPS

## Contact:

## Academic Director:

Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-4435890, adjensen@syr.edu

## Administrative Director:

Christine M. Praino, Senior Program Administrator, University College, 315-443-1317, cmpraino@ syr.edu

## Faculty:

Faculty from schools/colleges across campus, in addition to Michael Evans, Bart Murphy and Susan Conklin (part-time instructors).

## Description:

Understand the importance of professional relationships, networking and how to establish and manage a local and global workforce. Recognize the difficulty and conflict in professional situations, analyze possible causes, and propose creative scenarios for resolution. Problem-solve, manage collaborative diverse teams. Develop tasks and work processes for desired organizational outcomes, ability to work face-to-face or virtually.

## Admission:

BPS students must declare a program of study by the time they have reached junior standing, in a meeting with a University College Academic Advisor.

## Requirements

Courses (required and elective): 120 credits - divided into 4 segments:

- Liberal Studies Core 30-37 credits
- Professional Competencies Core 30 credits
- Concentration Program of Study 30 credits
- Electives 23-30 credits

Three required courses:

- BPS 211 - Introduction to Professional Studies
- CRL 301 - Introduction to Creative Leadership
- BPS 411 - Senior Seminar


## Additional Information

No more than three courses ( 9 credits) may be taken in the School of Management.

Liberal Studies Core - 30-37 credits
(Mandatory for both programs of study.)
The Liberal Studies Core gives a foundation in writing, language or quantitative skills, humanities, social science, natural science, and critical reflections. It draws upon lower-division courses in the College of Arts and Sciences.

## Writing (Choose 6 credits)

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing

Foreign Language or Quantitative Skills (Choose 6-12 credits)

## Foreign Language:

Complete Language Skills Sequence Requirement outlined in the Liberal Arts Core Guidebook.

## Quantitative Skills:

Complete Quantitative Skills Sequence Requirement outlined in the Liberal Arts Core Guidebook.

Humanities (Choose 6 credits)
Any course listed in the Humanities Division of the Liberal Arts Core Guidebook.

## Social Science (Choose 6 credits)

Any course listed in the Social Sciences Division of the Liberal Arts Core Guidebook.

Natural Science (Choose 3-4 credits)

Any course listed in the Natural Sciences Division of the Liberal Arts Core Guidebook.

## Critical Reflections on Ethical \&

 Social Issues (Choose 3 Credits)Any course listed in the Critical Reflections on

Ethical \& Social Issues Division of the Liberal Arts Core Guidebook.

## Professional Competencies Core - 30 credits

The Professional Competencies Core covers fundamental knowledge and abilities required in the modern workplace, such as ethics and critical thinking, problem solving, human relations, diversity and change management, budgeting and resource management, and teamwork. It draws upon courses from several schools and colleges: Arts and Sciences (philosophy, public affairs, sociology, and writing), Information Studies, Management, (accounting, finance, marketing, strategic human resources), and Visual and Performing Arts (communication and rhetorical studies). The Professional Competencies Core includes an introductory course, and a capstone experience required of all B.P.S. students.
Designed to draw together issues from across the entire B.P.S. program, these courses summarize concepts covered in the curriculum and develop students' skills in strategic decision-making that looks to the future.

## Ethics and Critical Thinking: (Choose 3 credits)

- PHI 171 - Critical Thinking
- LPP 467 - Management and Ethics
- PHI 393 -Contemporary Ethics


## Communication: (Choose 9 credits)

- BPS 415 - Digital and Business Communications for Professional Studies
- CRS 225 - Public Advocacy
- CRS 325 - Presentational Speaking
- CRS 435 - Interviewing
- CRS 331 - Interpersonal Communication
- WRT 307 - Advanced Writing Studio: Professional Writing
- IST 444 - Information Reporting and Presentation

Relationship Management: (Choose 6 credits)

- CRS 430 - Intercultural Communication
- SWK 326 - Persons in Social Context
- SWK 328 - Human Diversity in Social Contexts
- BPS 382 - Leading Cooperative Negotiations
- OGL 342 - Customer Relations Leadership

Business Processes: (Choose 6

## UNDERGRADUATE COURSE CATALOG

## credits)

- ACC 151 - Introduction to Financial Accounting
- LPP 255 - Introduction to the Legal System
- BPS 315 - Practical Financial Management for the Working Professional
- IST 335 - Introduction to Information-Based Organizations
- GET 234 - Effective Collaboration in a Globally Distributed Environment

GET 235 - Leveraging Emerging Technologies
Program/Project/Process
Management: (Both Required)

- BPS 211 - Introduction to Professional Studies
- BPS 411 - Senior Seminar

Program of Study Requirements: Creative Leadership (30 credits)

## Introduction (Required)

- CRL 301 - Introduction to Creative Leadership


## Communication/Problem-Solving

 (Choose 9 credits)- BPS 382 - Leading Cooperative Negotiations
- CRS 313 - Nonverbal Communication
- CRS 335 - Leadership/Stewardship Communication
- CRS 338 - Communication in Organizations
- ANT 424 - Negotiation: Theory and Practice
- IST 444 - Information Reporting and Presentation
- LGL 322 - Alternative Dispute resolution
- PAF 420 - Interpersonal Conflict Resolution Skills
- PAF 421 - Mediation:Theory and Practice
- PAF 424 - Conflict Resolution in Groups

Creativity/Design - Thinking (Choose 12 credits)

- DES 202 - Contemporary Issues in Design
- DES 248 - Design Issues
- DES 452 - Branding and Marketing Works
- EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
- EEE 375 - Entrepreneurial Family Business Management
- EEE 378 - Imagination, Entrepreneurship and Creative Problem Solving
- IDS 401 - What's the Big Idea?: Technology Innovation
- IDS 402 - Idea2Startup
- IDS 403 - Startup Sandbox

Leadership (Choose 3 credits)

- OGL 472-Organizational Leadership

Relationship/Workforce Management (Choose 3 credits)

- HTW 405 - Cognitive Behavioral Approaches to Stress Reduction
- LGL 403 - Business Organizations
- SOC 466-Organizations and Society


## Note:

The degree is administered by University College with the involvement of other schools and colleges within Syracuse University. Each student should consult with their UC Academic Advisor to structure a plan for degree completion.

## Knowledge Management, BPS

## Contact:

## Academic Director:

Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-4435890, adjensen@syr.edu

## Administrative Director:

Christine M. Praino, Senior Program Administrator, University College, 315-443-1317, cmpraino@ syr.edu

## Faculty:

Faculty from schools/colleges across campus, in addition to Richard Garza.

## Description:

Understand the role of information, its use as a resource tool in organizations \& society; understand social media, data management, and information security. Make sense of the amount of data available, problem-solve, manage collaborative, diverse teams, and propose creative solutions. Develop tasks and work processes for desired organizational outcomes, work face-toface or virtually, and critically and ethically assess big data.

## Admission:

BPS students must declare a program of study by the time they have reached junior standing, in a meeting with a University College Academic Advisor.

## Requirements

Courses (required and elective): 120 credits - divided into 4
segments:

- Liberal Studies Core 30-37 credits
- Professional Competencies Core 30 credits
- Concentration Program of Study 30 credits
- Electives 23-30 credits.

Four required courses:

- BPS 211 - Introduction to Professional Studies
- KNM 301 - Introduction to Knowledge Management
- KNM 401 - Professional Issues in Knowledge Management
- BPS 411 - Senior Seminar


## Additional Information

No more than three courses ( 9 credits) may be taken in the School of Management.

## Liberal Studies Core - 30-37 credits

(Mandatory for both programs of study.)
The Liberal Studies Core gives a foundation in writing, language or quantitative skills, humanities, social science, natural science, and critical reflections. It draws upon lower-division courses in the College of Arts and Sciences.

## Writing (Choose 6 credits)

- WRT 105 - Studio 1: Practices of Academic Writing
- WRT 205 - Studio 2: Critical Research and Writing


## Foreign Language or Quantitative Skills (Choose 6-12 credits)

## Foreign Language:

Complete Language Skills Sequence Requirement outlined in the Liberal Arts Core Guidebook.

## Quantitative Skills:

Complete Quantitative Skills Sequence

## UNDERGRADUATE COURSE CATALOG

Requirement outlined in the Liberal Arts Core Guidebook.

Humanities (Choose 6 credits)
Any course listed in the Humanities Division of the Liberal Arts Core Guidebook.

Social Science (Choose 6 credits)
Any course listed in the Social Sciences Division of the Liberal Arts Core Guidebook.

## Natural Science (Choose 3-4 credits)

Any course listed in the Natural Sciences Division of the Liberal Arts Core Guidebook.

## Critical Reflections on Ethical \& Social Issues (Choose 3 Credits)

Any course listed in the Critical Reflections on Ethical \& Social Issues Division of the Liberal Arts Core Guidebook.

## Professional Competencies Core - 30 credits

The Professional Competencies Core covers fundamental knowledge and abilities required in the modern workplace, such as ethics and critical thinking, problem solving, human relations, diversity and change management, budgeting and resource management, and teamwork. It draws upon courses from several schools and colleges: Arts and Sciences (philosophy, public affairs, sociology, and writing), Information Studies, Management, (accounting, finance, marketing, strategic human resources), and Visual and Performing Arts (communication and rhetorical studies). The Professional Competencies Core includes an introductory course, and a capstone experience required of all B.P.S. students. Designed to draw together issues from across the entire B.P.S. program, these courses summarize concepts covered in the curriculum and develop students' skills in strategic decision-making that looks to the future.

## Ethics and Critical Thinking: (Choose 3 credits)

- PHI 171 - Critical Thinking
- LPP 467 - Management and Ethics
- PHI 393 - Contemporary Ethics


## Communication: (Choose 9 credits)

BPS 415 - Digital and Business Communications for Professional Studies

- CRS 225 - Public Advocacy
- CRS 325 - Presentational Speaking
- CRS 331 - Interpersonal Communication
- CRS 435 - Interviewing
- WRT 307 - Advanced Writing Studio: Professional Writing
- IST 444 - Information Reporting and Presentation


## Relationship Management:

 (Choose 6 credits)- CRS 430 - Intercultural Communication
- SWK 326 - Persons in Social Context
- SWK 328 - Human Diversity in Social Contexts
- BPS 382 - Leading Cooperative Negotiations
- OGL 342 - Customer Relations Leadership


## Business Processes: (Choose 6 credits)

- ACC 151 - Introduction to Financial Accounting
- LPP 255 - Introduction to the Legal System
- BPS 300 - Selected Topics BPS Practical Financial Applications for Professional Studies
- IST 335 - Introduction to Information-Based Organizations

GET 234 - Effective Collaboration in a Globally Distributed Environment

- GET 235 - Leveraging Emerging Technologies


## Program/Project/Process

Management: (Both Required)

- BPS 211 - Introduction to Professional Studies
- BPS 411 - Senior Seminar


## Program of Study Requirements:

 Knowledge Management (30 credits)
## Introduction (Required)

- KNM 301 - Introduction to Knowledge Management


## Data Science (Choose 9 credits)

- GET 236 - Enterprise Data Analysis: Tools and Techniques
- GET 336 - Advanced Enterprise Data Analysis: Tools and Techniques
- IST 352 - Information Analysis of Organizational Systems
- IST 359 - Introduction to Database


## Management Systems

- ECN 301 - Intermediate Microeconomics
- MAS 362 - Decision Tools for Management


## Knowledge Management (Choose 9 credits)

- IST 445 - Managing Information Systems Projects
- KNM 401 - Professional Issues in Knowledge Management
- ECS 203 - Introduction to Technology
- OGL 472-Organizational Leadership


## Role of Technology/Data Security (Choose 3 credits)

- IDE 456 - Computers as Critical Thinking Tools
- CPS 155 - Introduction to Cyber Security
- ECS 354 - Green Technology and Sustainability
- IST 352 - Information Analysis of Organizational Systems
- PHI 378 - Minds and Machines
- PSC 318 - Technology, Politics, and Environment


## Communication/Social Media

 (Choose 3 credits)- IST 486 - Social Media in the Enterprise
- CRS 338-Communication in Organizations
- BPS 415 - Digital and Business Communications for Professional Studies
- WRT 426 - Studies in Writing, Rhetoric, and Information Technology


## Creativity/Organizational Skills (Choose 3 credits)

- IDS 401 - What's the Big Idea?: Technology Innovation
- EEE 439 - Entrepreneurship and Digital Commerce
- EEE 440 - Social Entrepreneurship in Action


## Note:

The degree is administered by University College with the involvement of other schools and colleges within Syracuse University. Each student should consult with their UC Academic Advisor to structure a plan for degree completion.

## Liberal Arts, AA

## Contact:

University College Student Administrative Services 315-443-3261

## Major Requirements

The Associate in Arts in Liberal Arts degree (A.A.) provides an interim credential for students working toward the baccalaureate degree. Offered under the auspices of The College of Arts and Sciences, Syracuse University's founding college, the degree provides a sound general education in the liberal arts by combining coursework in the humanities, the natural and social sciences, and mathematics. Students earning the associate's degree must complete a minimum of 30 credit hours of Syracuse University coursework while enrolled as a part-time student at University College.

## Liberal Studies, BA

## Contact:

University College Student Administrative Services 315-443-3261

## Major Requirements

The B.A. in Liberal Studies provides a general education in the areas of humanities, social sciences, mathematics, and natural sciences. Offered under the auspices of The College of Arts and Sciences, Syracuse University's founding college, the degree provides the opportunity to develop the skills and resources that today's employers want. Students earning the bachelor of liberal studies degree must complete a minimum of 30 credit hours of Syracuse University coursework while enrolled as a part-time student at University College.

## Certificate

Creative Leadership Certificate

## Contact:

## Academic Director:

Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-443-
5890, adjensen@syr.edu

## Administrative Director:

Christine M. Praino, Senior Program Administrator, University College, 315-443-1317, cmpraino@ syr.edu

## Faculty:

Faculty from schools/colleges across campus, in addition to Michael Evans, Bart Murphy and Susan Conklin (part-time instructors).

## Description:

Understand the importance of professional relationships, networking and how to establish and manage a local and global workforce. Recognize the difficulty and conflict in professionals situations, analyze possible causes, and propose creative scenarios for resolution. Problem-solve, manage collaborative diverse teams. Develop tasks and work processes for desired organizational outcomes, ability to work face-to-face or virtually.

## Admission:

Associate degree or 60 college credits.

## Requirements

## Courses:

15 credits in upper division major/concentration courses as indicated:

- CRL 301 - Introduction to Creative Leadership
- CRS 335 - Leadership/Stewardship Communication or
- BPS 382 - Leading Cooperative Negotiations
- IDS 401 - What's the Big Idea?: Technology Innovation or
- EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
- PAF 424 - Conflict Resolution in Groups or
- LGL 322 - Alternative Dispute Resolution
- OGL 472-Organizational Leadership

Other:
GPA 2.0 minimum
Degree
Certificate in Creative Leadership
Total Credits: 15
Note:
The certificate is administered by University College with the involvement of other schools and colleges of Syracuse University. Each student should consult with their UC Academic Advisor to ensure certificate completion.

## Academic Director:

Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-4435890, adjensen@syr.edu

## Administrative Director:

Christine M. Praino, Senior Program Administrator, University College, 315-443-1317, cmpraino@ syr.edu

## Faculty:

Faculty from schools/colleges across campus, in addition to Richard Garza.

## Description:

Understand the role of information, its use as a resource tool in organizations \& society; understand social media, data management, and information security. Make sense of the amount of data available, problem-solve, manage collaborative, diverse teams, and propose creative solutions. Develop tasks and work processes for desired organizational outcomes, work face-toface or virtually, and critically and ethically assess big data.

## Admission:

Associate degree or 60 college credits.

## Requirements

## Courses:

15 credits in upper division major/concentration courses as indicated:

- KNM 301 - Introduction to Knowledge Management
- IST 352 - Information Analysis of Organizational Systems or
- ECS 203 - Introduction to Technology
- IDE 456 - Computers as Critical Thinking Tools
- WRT 302 - Advanced Writing Studio: Digital Writing or
- BPS 415 - Digital and Business Communications for Professional Studies
- KNM 401 - Professional Issues in Knowledge Management


## Degree

Certificate in Knowledge Management

## Total Credits: 15

Note:
The certificate is administered by University College with the involvement of other schools and colleges of Syracuse University. Each student should consult with their UC Academic Advisor to ensure certificate completion.

## Bachelor of Professional Studies

## BPS 100 - Selected Topics

## University College

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BPS 101 - Introduction to Science, Technology, and Society

## University College

3 credit(s) At least 1x fall or spring
Crosslisted with: STS 101
Assessing technological innovations and their impact on society. Economic, political, and ethical considerations in development of public policy. Examples will include biotechnology and energy technology.

## BPS 200 - Selected Topics

## University College

1-6 credit(s)
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BPS 211 - Introduction to Professional Studies

## University College

3 credit(s) At least 1x fall or spring
Career and academic program planning. Survey of professional skills including meeting facilitation, project budgeting, public speaking, writing, and research skills. Introduces such professional competencies as ethics, diversity, teamwork, negotiation, and decision-making skills. Focus on goals and careers. Sophomore standing.

## BPS 270 - Experience Credit

## University College

1-6 credit(s) Irregularly
Participation in a discipline- or subject-related
experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing. Repeatable

## BPS 290 - Independent Study

University College
1-6 credit(s) Irregularly
In-depth exploration of a problem or problems. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## BPS 300 - Selected Topics

University College
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BPS 315 - Practical Financial Management for the Working Professional

## University College

3 credit(s) At least 1x fall or spring Introduction to personal financial management. Emphasis on personal financial decision making, interpreting financial data, budget planning, risk management, retirement and estate planning. Basic financial concepts of time value of money, asset valuation and risk and return. Introduction to the fundamental concepts, techniques and theories for making effective financial decisions. Students may not receive credit for FIN 378 if they receive credit for BPS 315.

## BPS 382 - Leading Cooperative Negotiations

University College
3 credit(s) Irregularly
Formulate and implement negotiation strategies with reference to fundamental concepts, current research, principles, and business application. Examine case studies and assess strategies in various diverse contexts. Lead and create a personalized negotiation framework.

## BPS 400 - Selected Topics

## University College

1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## BPS 411 - Senior Seminar

## University College

3 credit(s) At least 1x fall or spring Bachelor of professional studies (B.P.S.) curriculum summary and strategic future decisionmaking. Objectives: 1) adaptation in a dynamic environment, 2) acquire tools for decision-making, 3) build professional skills for transition to future conditions. Focus on integration of B.P.S. professions.

## BPS 415 - Digital and Business Communications for Professional Studies

## University College

3 credit(s) At least 1x fall or spring Practical skills for creating effective business communications, including memos, letters, reports, e-mails and technical documents. Examines format, style, genre and communicating with precision. Includes digital context for web/ social media, as well as concisely conveying data for a variety of audiences, including accessibility issues.

## BPS 470 - Experience Credit

## University College

1-6 credit(s)
Participation in a discipline- or subject-related experience. Students must be evaluated by written or oral reports or an examination. Limited to those in good academic standing.
Repeatable

## BPS 490 - Independent Study

## University College

1-6 credit(s)
In-depth exploration of a problem or problems.
Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor or instructors and the department.
Repeatable

## Creative Leadership

## CRL 301 - Introduction to Creative

 Leadership
## University College

3 credit(s) At least $1 x$ fall or spring Introduction to concepts of creative leadership. Principles related to foundational competencies of creative problemsolving; divergent thinking; gathering and using data to make informed decisions; and strategic and visionary thinking.

## Knowledge Management

## KNM 301 - Introduction to Knowledge Management

## University College

3 credit(s) At least $1 x$ fall or spring Introduction to knowledge management. Provides students with an understanding of theoretical and technical concepts, models of knowledge management and how they contribute to return-on-vision and return-on-investment driving organizational success.

## KNM 401 - Professional Issues in Knowledge Management

University College
3 credit(s) At least $1 x$ fall or spring
Discuss critical issues facing organizations that implement and sustain knowledge management systems, identify approaches to address issues and evaluate best practices in light of emerging technologies, using case studies.
PREREQ: KNM 301

## Legal Studies

## LGL 201 - Introduction to Legal Systems and Legal Ethics

## University College

3 credit(s) Irregularly
Examine definitions and sources of law and organization of judicial system. Representative substantive areas of law covered to develop case analysis, legal thinking, and writing. Codes of professional ethics for lawyers and non-lawyers also explored.

## LGL 322 - Alternative Dispute

## Resolution

## University College

3 credit(s) Upon sufficient interest Fundamentals of arbitration, mediation, and negotiation in legal disputes and litigation are examined. Practical applications in business, community, and domestic settings studied. Increasing use of court ordered ADR explored. Procedures, skills, and ethics are covered.

## LGL 403 - Business Organizations

## University College

3 credit(s) Irregularly
Review of the major areas of business organizational law. Comparisons of sole proprietorship, partnership, corporation, and agency. Focus on corporate operations. Employer/ employee relationship and statutes and regulations affecting employment are examined.

## Organizational Leadership

OGL 300 - Selected Topics
University College
1-6 credit(s) Irregularly
Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## OGL 342 - Customer Relations

## Leadership

## University College

3 credit(s) Irregularly
World-class practices in customer relations. Review of current research, critical analysis of case studies, workplace applications. Designing and leading plans and change, developing support structures and processes. Assessment and evaluation.

## OGL 400 - Selected Topics

University College
1-6 credit(s) Irregularly Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester. Repeatable

## OGL 472-Organizational Leadership

## University College

3 credit(s) Irregularly
Theoretical models and experiential practices of leadership. Concepts, best practices, and business applications. Acquire competency as a strategist, facilitator, change agent, and navigator.

## University College Faculty

Daniel G. Cantone, Adjunct, Professional Studies J.D., Syracuse University College of Law, 1981

Susan Conklin, Adjunct, Professional Studies M.B.A., Syracuse University

Michael Evans, Adjunct, Professional Studies Ph.D. University of Sarasota

Mitch Franklin, Adjunct, Professional Studies
Ph.D., Walden University
Richard Garza, Adjunct, Professional Studies
M.S., Syracuse University

Bartholomew Murphy, Adjunct, Professional
Studies
B.S., University of Missouri/Columbia College

Marcene S. Sonneborn, Adjunct, Professional Studies
M.B.A., Syracuse University

Charles M. Sprock, Adjunct, Professional Studies
J.D., Notre Dame Law School

Elizabeth Wimer, Adjunct, Professional Studies M.A. Syracuse University

# SUNY-ESF (Partner Institution) 

1 Forestry Drive, Syracuse, NY 13210 www.esf.edu/

## About the College

State University of New York
College of Environmental Science and Forestry (ESF)
Quentin Wheeler, President
223 Bray Hall, 470-6681
S. Scott Shannon

Associate Provost for Instruction and Dean of the Graduate School
227 Bray Hall, 470-6599
Susan H. Sanford
Director of Undergraduate Admissions 218 Gateway Center, 470-6600

The State University of New York College of Environmental Science and Forestry (ESF) adjoins the Syracuse University campus and is closely associated with the University. The College is a doctoral-granting institution of the State University of New York. ESF enrolls approximately 2,350 students, including 550 at the graduate level.

The College has extensive modern laboratories, classrooms, and equipment and instrumentation. Off-campus facilities include 25,000 acres of forest land at eight locations - four in the Adirondacks, three elsewhere in New York state and one in Costa Rica, used for instruction, demonstration, and research. Two-year programs leading to the associate's degree in forest technology, surveying technology, and environmental and resources conservation are offered at The Ranger School in Wanakena, New York.

A variety of master's and doctoral programs are also available at ESF. Syracuse University juniors and seniors are invited to learn more about these programs and about ways to accelerate admission into graduate programs by inquiring at 227 Bray Hall.
ESF students have the same privileges as SU students with regard to health services and the use of dining halls, library facilities, testing services, and athletic and recreational facilities. They also share the wide range of social and cultural resources available at the University. Students at ESF and Syracuse University take courses on both campuses to enrich and complement their major programs.

# Undergraduate Programs 

## ESF - Undergraduate Programs

The College offers undergraduate study in the following areas:

## Degree Programs and Areas of Study

The College is authorized to award the following undergraduate degrees. Enrollment in programs that are not registered or otherwise approved programs may jeopardize a student's eligibility for certain financial aid programs. Further descriptions and coursework requirements of the individual academic programs may be found online at www.esf.edu/admissions/programs.htm

## Associate in Applied Science

 (A.A.S.)Environmental and Resources Conservation (HEGIS Code 5403)
Forest Technology (HEGIS Code 5403)
Land Surveying Technology (HEGIS Code 5309)

## Bachelor of Landscape <br> Architecture (B.L.A.)

Landscape Architecture (HEGIS Code 0204)

## Bachelor of Science (B.S.)

Aquatic and Fisheries Science (HEGIS Code 0115)

Bioprocess Engineering (HEGIS Code 0905) Biotechnology (HEGIS Code 0499) Chemistry (HEGIS Code 1905) with options in biochemistry and organic chemistry of natural products, environmental chemistry, or natural and synthetic polymer chemistry.
Conservation Biology (HEGIS Code 0420) Construction Management (HEGIS Code 0599) with an elective concentration in sustainable construction and renewable materials. Environmental Biology (HEGIS Code 0420) Environmental Education and Interpretation (HEGIS Code 0499)

Environmental Health (HEGIS Code 0420, beginning fall 2014)

Environmental Resources Engineering (HEGIS Code 0999)
Environmental Science (HEGIS Code 0420) with options in renewable energy, environmental information and mapping, watershed science, health and the environment, earth and atmospheric systems science, environmental analysis, or environmental engineering science. Environmental Studies (HEGIS Code 0201) with options in biological science applications;
environmental policy, planning and law; or environmental communication, culture and writing. Forest Ecosystem Science (HEGIS Code 0114) Forest Engineering (HEGIS Code 0999)
Forest Health (HEGIS Code 0114)
Forest Resources Management (HEGIS Code 0115)

Natural Resources Management (HEGIS Code 0115)

Paper Engineering (HEGIS Code 0999) with a minor in management.
Paper Science (HEGIS Code 0999) with a minor in management.
Sustainable Energy Management (HEGIS Code 0115)

Wildlife Science (HEGIS Code 0107)
Wood Products Engineering (HEGIS Code 0999)

## Bachelor of Landscape <br> Architecture/Master of Science <br> B.L.A./M.S. Fast Track (HEGIS Code 0204)

## ESF Academic Minors

ESF offers a variety of Academic Minors that are open to SU students. Each ESF minor, like other traditional academic minors offered by SU's various schools and colleges, includes at least 18 credit hours of coursework. ESF's minors focus on a variety of areas of specialized study of the environment, ranging from landscape architecture to natural resources and environmental policy. Please see list and description of ESF Minors available to SU Students under Academic Offerings.

## Minor

## Bioprocess Science Minor

Coordinator: Dr. Gary Scott
The bioprocess science minor gives students an understanding of the rapidly developing bioprocessing industry, which uses the chemical, physical and biological processes developed by living organisms or their cellular components in a type of advanced manufacturing of specialty commercial products. Bioprocess science will influence diverse fields as it becomes widely used, such as for producing energy from sustainable sources.
This minor is available to all SU students as well as ESF students (except students in the bioprocess engineering program) who maintain a minimum cumulative grade point average of 2.70, and who desire to develop greater knowledge of bioprocess science and its related fields.

Interested students must submit an application form, with courses listed, to the Paper and Bioprocess Science Minor Coordinator (205

Walters Hall) with approval of their academic advisor and the chair of their department. Students should declare the minor by the end of the sophomore year, but may get permission of their home department for enrollment at any time after that. Successful completion of the minor will be noted on the student's transcript.
Eighteen credit hours (6 courses) are required to satisfy the minor.

Specified Courses:
PSE 370 Principles of Mass and Energy Balance (3) or similar;

BPE 310 Colloid and Interface Science (3) or similar;

BPE 420 Bioseparations (3) or similar.
Three Directed Elective Courses:
From both ESF and Syracuse University including biology, forestry, chemical engineering, chemistry, paper science and engineering, bioprocess engineering, and environmental and biological engineering. Students are required to complete at least one course in the area of chemistry, biology and chemical engineering.

## Specified courses:

- PSE 370 - Principles of Mass and Energy Balance
- BPE 310 - Colloid and Interface Science
- BPE 420 - Bioseparations


## Three Directed Elective Courses

And at least three directed elective courses available from both ESF and Syracuse University, including biology, forestry, chemical engineering, chemistry, paper science and engineering, bioprocess engineering, and environmental and biological engineering. Students are required to complete at least one course from a list of biological and chemistry electives and at least one course from a list of engineering electives. The complete list of courses is available from faculty advisors.

## Construction Management Minor

Coordinator: Prof. Paul Crovella

The ESF minor in construction management prepares students for management careers in the construction industry. This minor is available to SU students as well as ESF students. The basic objective of the minor is to provide a fundamental understanding of the various methods used to take the design into the field and construct a quality structure in the most efficient and effective manner with minimal environmental impacts. To complete this minor, students must pass the
following courses with a cumulative GPA of 2.0 or higher.
Admission to the minor requires junior status, a cumulative GPA of 2.5 or higher, and permission of the construction management undergraduate curriculum coordinator.
Required courses ( 3 credits each): CME 255 Plan Interpretation and Quantity Take-Off; CM 343 Construction Estimating; CM 453 Construction Planning and Scheduling; CM 454 Construction Project Management.
Two additional courses chosen from the following (3 credits each)
CME 330 Building Codes and Zoning Practice; CME 331 Construction Safety; CME 335 Cost Engineering; CME 350 Construction Methods and Equipment; CME 444 Materials Marketing; CME 455 Construction Contracts and Specifications.

Total credits required: 18

## Required courses (3 credits each)

- CM 342 - Light Construction
- CM 343 - Construction Estimating
- CM 453-Construction Planning and Scheduling
- CM 454 - Construction Project Management


## Two additional courses chosen from the following (3 credits each)

- CM 330 - Building Codes and Zoning Practice
- CM 331 - Construction Safety
- CM 335-Cost Engineering
- CM 350 - Construction Methods and Equipment
- CM 444 - Materials Marketing
- CM 455 - Construction Contracts and Specifications

Total credits required: 18

## Landscape Architecture Studies Minor

The ESF minor in landscape architecture provides an understanding of the natural and human factors that shape our physical environment. This minor is available to SU students as well as ESF students. To complete this minor, students must pass the following courses and an additional landscape architecture course approved by the landscape architecture undergraduate curriculum director with a cumulative grade point average of

## 2.0 or higher.

Admission to the minor requires a cumulative grade point average of 2.5 or higher and permission (ESF petition) of the Landscape Architecture Undergraduate Curriculum Director (331 Marshall Hall).

## Required courses (3 credits each)

- LSA 220 - Introduction to Landscape Architecture
- LSA 311 - Natural Processes in Planning and Design
- LSA 312 - Place/Culture/Design
- LSA 305 - History of Landscape Architecture I
- LSA 306 - History of Landscape Architecture II
- LSA 451 - Comprehensive Land Planning
- LSA 496 - Special Topics in Landscape Architecture (recent topics include Community Development Process, Urban Design Seminar, 20th-Century Landscape and Rural Community Design Studio)


## Total credits required: 18

## Natural Resources and Environmental Policy Minor

The ESF minor in natural resources and environmental policy is intended to develop an awareness of the interrelationships among parts of the biophysical environment and policy development; to develop a focused special application within the student's major; and to develop the ability to intelligently interact with natural resources and environmental specialists in planning and policy formation. This minor is available to SU students as well as ESF students. To complete this minor, students must pass the following courses with a cumulative grade point average of 2.0 or higher.
Admission to the minor requires junior status, a cumulative grade point average of 2.5 or higher, and permission of the Forest and Natural Resources Management Undergraduate Curriculum Coordinator (320 Bray Hall). Students should also have completed a basic course in microeconomics, political science, and general biology.

## Required courses (3 credits each)

- FOR 321 - Forest Ecology and Silviculture
- FOR 333 - Managerial Economics for Environmental Professionals
- FOR 360 - Principles of Management
- FOR 465 - Natural Resources and Environmental Policy
- FOR 488 - Natural Resources Administration Law
- ENS 550 - Environmental Impact Analysis: Principles and Strategies


## Total credits required: 18

## Paper Science Minor

Coordinator: Dr. Gary Scott
The paper and related industries (including pulp, mineral, chemical and machinery suppliers) continually seek knowledgeable and skilled employees. Each year, companies hire numerous graduates of chemical, mechanical and environmental engineering programs as well as chemists and other environmental professionals in addition to paper science and engineering graduates. Salaries for new hires are among the highest for all fields of study at the bachelor's degree level. This minor gives students a thorough understanding of the paper industry that will allow them to apply their major field of study to this growth industry.

The paper science minor is available to all ESF undergraduate students (except students in the paper science and paper engineering programs) who maintain a minimum cumulative grade point average of 2.70 and who desire to develop greater knowledge of paper science and its related fields.
Interested students must submit an application form, with courses listed, to the Paper Science Minor Coordinator (205 Walters Hall) with approval of their academic advisor and the chair of their department. Students should declare the minor by the end of the sophomore year, but may get permission of their home department for enrollment at any time after that if course coverage is already in progress. Successful completion of the minor will be noted on the student's transcript.
Eighteen credit hours (6 courses) are required to satisfy the minor.

Specified Courses:
PSE 200 - Introduction to Papermaking (3);
PSE 202 - Pulp and Paper Laboratory Skills (1);
PSE 370 - Principles of Mass and Energy Balance (3), or similar.

Directed Elective Courses:
At least eleven credit hours in paper science courses are required as directed electives courses from the following list:
PSE 350 Fiber Processing (3);
PSE 437 Troubleshooting and Maintenance (3); PSE 465 Paper Properties (3);

PSE 466 Paper Coating and Converting (3); PSE 467 Papermaking Wet End Chemistry (3); PSE 468 Papermaking Processes (6)

## Specified courses

- PSE 300 - Introduction to Papermaking
- PSE 302 - Pulp and Paper Laboratory Skills
- PSE 370 - Principles of Mass and Energy Balance


## Directed electives courses (at least 11 credits):

- PSE 350 - Pulping and Bleaching Processes
- PSE 351 - Pulping and Bleaching Laboratory
- PSE 465 - Paper Properties
- PSE 466 - Paper Coating and Converting
- PSE 467 - Papermaking Wet End Chemistry
- PSE 468 - Papermaking Processes


## Recreation Resource and Protected Area Management ESF Minor

This minor provides students with the opportunity to combine visitor management with protected area management. This minor is available to SU students as well as ESF students. Understanding the need to balance the opportunity for visitor experiences with protecting and stewarding protected areas provides professional insight into planning and managing those areas for limited visitor access. Understanding the motivations, preferences, and behavior of recreational users is necessary to integrate the human dimensions into protected area management with consideration of the social and environmental factors related to such management. Protected area managers need to be able to manage both the resource itself as well as a wide variety of users, such as campers, hikers, bird watchers, boaters, nature photographers and others who enjoy naturebased experiences in extensive protected area environments owned by public agencies, private landowners, or NGOs.

Admission to the minor requires students to have a cumulative grade point average of 2.75 , and permission of the Forest and Natural Resources Management Curriculum Director (320 Bray Hall). Nineteen credit hours of courses are required.

## Specified courses:

- EFB 320 - General Ecology
- EFB 416 - Introduction to Environmental Interpretation
- FOR 372 - Fundamentals of Outdoor


## Recreation

- FOR 475 - Human Behavior and Recreation Visitor Management
- FOR 476 - Ecotourism and Nature Tourism
- FOR 478 - Wilderness and Wildlands Management


## Renewable Energy - ESF Minor

The development of sustainable sources of energy has become a critical national and global issue due to concerns about the quality and quantity of the different potential resources, energy security, and potential impacts of each on the environment and human health. This minor is available to SU students as well as ESF students. It is essential that our society and energy professionals gain an understanding of production and conversion of different forms of energy, their current and future supplies, the markets and policy mechanisms that regulate their supply, and the associated impacts on the environment for each fuel. In the past both traditional and renewable energy sources have been studied one resource at a time and usually from the perspective of a single discipline. This minor will provide students an opportunity to examine different sources of traditional and renewable energy simultaneously in the context of our total energy use using a systems perspective. Students will be exposed to views from a variety of disciplines as they wrestle with a wide array of issues related to current and future energy supply and use. The understanding and development of renewable energy requires expertise from a wide range of disciplines. This minor will be interdisciplinary in nature with instructors from different disciplines teaching the core courses. The Renewable Energy minor is available to all ESF and SU undergraduate students (except students who are in the Renewable Energy option in Environmental Science) who have a GPA of 2.75 or better by the end of their sophomore year, and with permission of the Environmental Science Curriculum Director (358 Illick Hall). The minor will require a minimum of 18 credits, 15 of which are required courses. The remaining 3 credits can be selected from the list of suggested courses.

## Specified courses:

- EFB 120 - Global Environment
- ESC 325 - Energy Systems
- ESC 335 - Renewable Energy Systems (EFB 120 is a pre-req)
- ESC 422 - Energy Markets and Regulation
- ESC 450 - Renewable Energy Capstone Planning
- ESC 460 - Renewable Energy Capstone Seminar


## UNDERGRADUATE COURSE CATALOG

And a minimum of three credits from the following list of suggested courses:

- BPE 441 - Biomass Energy
- EFB 516 - Ecosystems
- EFB 518 - Systems Ecology
- ERE 351 - Basic Engineering Thermodynamics
- ERE 519 - Green Entrepreneurship
- FCH 360 - Physical Chemistry I
- FCH 571 - Wood Chemistry I: General Wood Chemistry
- FOR 415 - Forestry Consulting and Wood Procurement
- PSE 361 - Engineering Thermodynamics
- PSE 370 - Principles of Mass and Energy Balance


## Sustainable Construction Management Minor

Coordinator: Prof. Paul Crovella
The ESF minor in sustainable construction prepares students for careers related to sustainable construction. This minor is available to all ESF and SU undergraduate students. The basic objective of the minor is to provide a fundamental understanding of the sustainable concepts and methods used to take a design into the field and build a sustainable structure in the most efficient and effective manner with minimal environmental impacts. Eighteen credit hours ( 6 courses) taken in residence are required to complete the minor. To complete this minor, students must pass six of the following courses taken in residence with a cumulative GPA of 2.0 or higher.

Admission to the minor requires a cumulative grade point average of 2.5 or higher, and permission of the construction management undergraduate curriculum coordinator. Choose 6 courses ( 18 credits) from the following:

CME 215 Sustainable Construction (3)
CME 255 - Plan Interpretation and Quantity TakeOff (3)

CME 387 Renewable Materials for Sustainable Construction (3)

CME 305 Sustainable Energy Systems for Buildings (3)

CME 306 Engineering Materials for Sustainable Construction (3)

CME 304 Environmental Performance Measures for Buildings (3)

CME 343 Construction Estimating (3)
CME 405 Building Information Modeling (3)

CME 422 Composite Materials for Sustainable Construction (3)

CME 565 Sustainable Innovations in Residential
Construction (3)
CME 444 Materials Marketing (3)
CME 453 Planning and Scheduling (3)
CME 454 Project Management (3)

## Choose 6 courses (18 credits) from the following

- CME 215 - Sustainable Construction
- CME 387 - Renewable Materials for Sustainable Construction
- CME 305 - Sustainable Energy Systems for Buildings
- CME 306 - Engineering Materials for Sustainable Construction
- CME 304 - Environmental Performance Measures for Buildings
- CME 343 - Construction Estimating
- CME 405 - Building Information Modeling
- CME 422 - Composite Materials for Sustainable Construction
- CME 565 - Sustainable Innovations in Residential Construction
- CME 444 - Materials Marketing
- CME 453 - Planning and Scheduling
- CME 454 - Project Management


[^0]:    Program of Study
    A matriculated student who is studying for the master's degree must satisfactorily complete a program of study of not less than 30 credits that is approved by the academic unit and filed with the Graduate Degree Certification Office.

    ## Time to Degree

    You must meet all requirements for the master's degree within seven years from the time you register for the first course to be used in your master's degree program. If you do not meet this requirement, you may petition your school/college for reinstatement of credits that were completed outside the seven-year timeframe.

    ## Comprehensive Examinations

    Your school/college will determine the nature of any comprehensive examination or examinations that apply toward your master's degree. Such exams may or may not be directly related to the content of particular courses you have taken.

    Oral Examination
    An oral examination committee consists of four

[^1]:    - registered for full-time study (9 credits for fall, spring, or summer in a program approved by the student's advisor)
    - holding an appointment as a graduate assistant or fellow and registered for the semester (fall and spring only)

[^2]:    - SELECTED TOPICS (TITLE MAY VARY) (Subject) (Catalog Number) Selected Topics 1-6 credits
    Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

[^3]:    - ARC 331 - Art and Architecture of India
    - ARC 332 - Sixteenth Century Italian Architecture

[^4]:    * EDU 304 and RED 326 should be taken after EDU 204. EDU 204 may be taken as early as the second semester of first year. All must be

[^5]:    * To be counted towards the Arabic Minor all homework and exams must be completed in the Arabic language.

[^6]:    ETS 330 - Topics in Theorizing Meaning and Interpretation

    College of Arts and Sciences
    3 credit(s) Irregularly

[^7]:    HST 342 - Modern American Political Thought

    College of Arts and Sciences
    3 credit(s) Irregularly
    Crosslisted with: PSC 327
    American political thought from the impact

[^8]:    HST 424 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone

    ## College of Arts and Sciences

    3 credit(s) Every semester

[^9]:    REL 123 - Religious Auto/Biography
    College of Arts and Sciences
    3 credit(s) Irregularly

[^10]:    SOC 454 - Family and Gender in Contemporary Italy

    College of Arts and Sciences
    3 credit(s)
    Crosslisted with: HST 454, WGS 454
    Family structures and gender relations in Italy

[^11]:    CSE 262 - Digital System Design and Simulation

    College of Engineering and Computer Science
    1 credit(s) At least 1x fall or spring
    Basic digital logic circuit design and

[^12]:    CSE 588 - Translator Design
    College of Engineering and Computer Science
    3 credit(s) Upon sufficient interest

[^13]:    ART 101 - First Year Colloquium

[^14]:    - Art/Design History Requirement (x2) 3 credits each
    - Art/Design History Elective (x3) 3 credits each
    - ART 340 - Visiting Artist Lecture Series (x3) 1 credit each

[^15]:    - FND Studio (x4) 3 credits each

    PTG 255 - Figure Drawing or

[^16]:    - Art/Design History Requirement (x2) 3 credits each

[^17]:    Elective Courses: 12 credits
    Choose FOUR from the following:

    - JAM 371 - Surface Techniques and Processes
    - JAM 372 - Metal Forming
    - JAM 373 - Stones and Stonesetting
    - JAM 374-Color on Metal

[^18]:    - WRT 105 - Studio 1: Practices of Academic Writing
    - WRT 205 - Studio 2: Critical Research and Writing

[^19]:    DRW 204 - Painting and Drawing for Non-Art Majors

    School of Art and Design
    1-3 credit(s) Every semester
    Crosslisted with: PTG 204

