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Welcome to a digital world of academic offerings that will shape your student experience here. Inside Syracuse University's searchable online course catalog, you'll find detailed information about all of the schools, colleges, and hundreds of distinct degree programs offered by Syracuse University, including descriptions of the faculty and related courses. You also will discover many special opportunities to enhance your academic experience, including study abroad programs, centers for interdisciplinary learning, and immersion opportunities across the U.S. and around the world.

Perhaps you have perused this catalogue before, or you are new to Syracuse University. Whatever your level of familiarity, we are certain you will discover new offerings and options to inspire you, to challenge you, and to shape the direction you take and the choices you make on your academic journey. We are committed to your success. The robust course offerings in this catalogue demonstrate our willingness to provide you an evolving and enriching experience as you pursue personal 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.

Please be aware that the information concerning academic requirements, courses, and programs of study in the catalogue does not establish an irrevocable contract between the student and the University. The University can change, discontinue, or add academic requirements, courses, and programs of study at any time, without notice. Of course, every effort will be made to provide timely notice to students in order to help in the planning process. It is the responsibility of the individual student to confirm that all appropriate degree requirements are met.

I encourage you to look inside this catalogue for opportunities that will make your Syracuse University experience truly unique, exciting, valuable and unforgettable.

Michele Wheatly
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 13 undergraduate and graduate schools and colleges. Founded in 1870, the University today has an enrollment of more than 21,000 undergraduates and graduate 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 hillsides 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 (TTY), 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.

Academic Calendar

Academic Calendars for 2016-17

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 315-443-1513, or send an e-mail to http://financialaid.syr.edu/emailus/. 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 non-immigrant 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://syr.edu/registrar/staff/classrooms/Building_Locking_and_Related_Policies.pdf

**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, Sims 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 primarily in Maxwell Hall and Eggers Hall with additional facilities in Lyman 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 Igen 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 Igen 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 is primarily located in the Falk College Complex. The college’s Department of Marriage and Family Therapy is located in off-campus 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 three-building 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 Sims Hall, the Henry Health Center at 111 Waverly, 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 Tenney Ice Pavilion 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. Serving over one million visitors annually, the Libraries offer extensive print and online collections in a wide range of formats, knowledgeable librarians and staff, and up-to-date 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 4.6 million printed volumes, over 170,000 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 BlackStone LaunchPad on the first floor of Bird Library is a new experiential 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.

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.
- **Syracuse University Press**
- **University Archives**, including the Pan Am 103 Archives

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 Services

Center for Science and Technology, 315-443-2677
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 high-speed 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 students. SUHS provides student-centered ambulatory health care. On campus services include:

- **Office visits**
- **Immunizations, vaccines**
- **Laboratory**
- **Ambulance & nonurgent 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 community. 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 off-campus. Health insurance provides students with the reassurance that they are prepared for any medical situation.

Beginning this 2016-17 academic year, all full-time matriculated students will need to provide proof they have health insurance in a plan that is US based, meets the criteria of the Affordable Care Act and has coverage beyond urgent and emergency care in the Syracuse area.

Students should always carry their health insurance information with them. Additional information, including a Frequently Asked Questions page, is available on our website http://health.syr.edu/new-student-health-insurance-plan.html

### 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
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 LinkedIn group is a valuable resource for students as they explore careers and break into the working world. ‘CuseConnect is a LinkedIn 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 internships 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 is 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**

Peter A. Vanable, Interim Dean
Gabrielle Chapman, Associate Dean
304 Lyman Hall, 315-443-2543
graduateschool.syr.edu
gradschool@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 unit 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-to-Know 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 2009, 81.4 percent had earned their bachelor’s degrees as of August 2015. 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**

<table>
<thead>
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<th>Department/Division</th>
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**General Information**
### General Information

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

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### Syracuse University Roster

#### University Officers

- Kent Syverud (Chancellor and President)
- Michele Wheatly (Vice Chancellor and Provost)
- Gwenn Judge (Interim Vice President and Chief Financial Officer)
- Jean Gallipeau (Comptroller)
- David J. Smith (Treasurer)
- Lisa Dolak (Senior Vice President, University Secretary)
- Samuel Scozzafava (Vice President for Information Technology and Chief Information Officer)
- Anthony Callisto (Senior Vice President for Safety, Chief Law Enforcement Officer)
- Daniel J. French (Senior Vice President, General Counsel)
- Andrew Gordon (Senior Vice President, Chief Human Resources Officer)
- Peter Sala (Vice President and Chief Campus Facilities Officer)
- Matthew Ter Molen (Senior Vice President, Chief Advancement Officer)
- Rebecca Reed Kantrowitz (Interim Senior Vice President and Dean of Student Affairs)
- Kevin Quinn (Senior Vice President for Public Affairs)
- Candace Campbell Jackson (Senior Vice President, Chief of Staff)
- J. Michael Haynie (Vice Chancellor for Strategic Initiatives)
- Nicole “Nicci” Brown (Vice President for Marketing and Interactive Media)
- Peter Vanable (Interim Vice President of Research, Interim Dean of the Graduate School)
- Sherburne “Shere” Abbott (Vice President, Sustainability Initiatives)
- Deborah Armstrong (Vice President for Advancement and External Affairs)
- Charles “Chuck” Merrihew (Vice President for Administration and External Affairs)

#### 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. Upon reasonable request, information contained in education records will be explained and interpreted to students by University personnel designated by the appropriate office. Students have the right to review only their own records.

When a record contains information about more than one student, the University will limit access to that part of the record which pertains only to the student requesting access unless information regarding the other student(s) cannot be segregated and redacted without destroying the meaning of the record insofar as it pertains to the requesting student.

II. The right to challenge the content of the student’s education records the student considers the information contained therein to be inaccurate, misleading, or in violation of the student’s privacy rights.

Students have a right to challenge the content of their education records if they consider the information contained therein to be inaccurate, misleading, or in violation of their rights of privacy. A student challenging information in his or her records should obtain a Request to Amend or Remove Education Records form from the Registrar's Office and clearly identify the part of the record he or she wants amended and specify why it is inaccurate, misleading or in violation of his or her rights of privacy. The Registrar may concur that an amendment is appropriate, and will take steps to make the amendment. If not, the student will be notified within a reasonable period of time that the records will not be amended and will be informed by the Registrar of the right to a formal hearing. If the hearing results in a final determination not to amend the record, the student will be 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.

The right to challenge information in education records 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, in which case the record will be corrected.

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.

The University may disclose education records without a student's prior written consent to school officials with legitimate educational interests. The University may make such disclosures in these and other circumstances as and to the extent permitted by FERPA.

A school official is: a person employed by the University in an administrative, supervisory, academic or research or support staff position; a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; 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 a person volunteering or otherwise performing services for the University. A contractor, consultant, volunteer, or other party to whom the University has outsourced institutional services or functions may be considered a school official under this exception only if he/she/it performs an institutional service or function for which the University would otherwise use employees, is under the direct control of the University with respect to the use and maintenance of education records, and agrees to use the education records only for the purposes for which they were disclosed.

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. This includes performing tasks specific to job, contractual, or volunteer duties and provision of a service or benefit relating to the student or the student’s family. The information sought and provided must be pertinent to and used within the context of official University business and not for a purpose extraneous to the official’s area of responsibility.

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.

The University may disclose education records without consent to parents of a dependent student as defined by the Internal Revenue Code, 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.)

The University may make such disclosures in the case of emergencies to appropriate persons, if the knowledge of such information is necessary to protect against an articulable and significant threat to the health or safety of a student or other persons.

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 school/college(s)

Students have the right to have some or all of this directory information withheld from the public if they so desire. To prevent disclosure of Directory Information, students must file a Request to Prevent Disclosure of Directory Information form with the Registrar’s Office, 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.

Any student who has reason to believe that the University is not complying with FERPA or this policy 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

For additional information about the University’s FERPA policy, see http://supolicies.syr.edu/ethics/ferpa.htm.
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://graduatestudents.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 “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

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 State Board for Higher Education
114 East Capitol Ave.
Little Rock, AR 72201
ADHE_Info@adhe.edu
http://www.adhe.edu/institutions/academic-affairs/institutional-certification-advisory-committee/grievance-form

California
California Departure of Private Postsecondary Education
PO. Box 980818
W. Sacramento, CA 95798-0818
bppe@dca.ca.gov
http://www.bppe.ca.gov/forms_pubs/complaint.pdf

However, if the complaint is not resolved through these processes, students may use the following list (current as of May 2016) to identify the office(s) to which complaints may be directed in the state in which they reside.

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 the Middle States Commission on Higher Education, the University's accrediting agency. See “Student Complaint Process” for additional information.

General Information

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 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 listed 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.
General Information

Georgia
The right of appeal of the final institutional decision may be made to:
Georgia Nonpublic Postsecondary Education Commission
2082 E Exchange Pl. #220
Tucker, GA 30084-5334
(770) 414-3300
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-complaint-process/

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
1 North Old State Capitol Plaza, Suite 33431
East Adams, 2nd Floor
Springfield, Illinois 62701
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
Indian Commission for Higher Education
101 W. Ohio Street, Suite 670
Indianapolis, IN 46204
http://www.in.gov/che/2744.htm
complaints@che.in.gov

Iowa
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/academic_affairs/private_out_of_state/complaint_process

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
customer.protection@ag.ky.gov
http://ag.ky.gov/family/consumerprotection/complaints/Pages/default.aspx

Louisiana
Louisiana Attorney General Office
Consumer Protection Section
PO Box 94005
Baton Rouge, LA 70804
ConsumerInfo@ag.state.la.us, 1-800-351-4889, 225-326-6465
http://www.ag.state.la.us/Complaint.aspx?articleID=16&catID=15
Louisiana Board of Regents
Attn: Nancy Beall or Dr. Larry Trembly
P.O. Box 3677
Baton Rouge, LA 70821-3677
http://www.regents.la.gov/assets/docs/2014/07/ProprietarySchoolsLaw.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

Maryland
* Syracuse University has registered its distance education programs with the Maryland Higher Education Commission.

Maryland Higher Education Commission
6 North Liberty Street, 10th Floor
Baltimore, MD 21201
(410) 767-3388
http://www.mhec.state.md.us/higherEd/acadAff/MHECSStudentComplaintProcess.pdf
Office of the Attorney General, Consumer Protection Division
200 St. Paul Place
Baltimore, MD 21202
Consumer Protection Hotline: (410) 528-8662
customer@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
PO Box 30018
Lansing, MI 48909

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?pageID=1078

Mississippi
Mississippi Commission on College Accreditation
3825 Ridgewood Road
Jackson, MS 39211-6453
Consumer Protection Division, Office of the Attorney General
PO Box 22947
Jackson, MS 39225-2947
http://www.ago.state.ms.us/index.php/contact
General Information

**Missouri**
Missouri Department of Higher Education
205 Jefferson Street, PO Box 1469
Jefferson City, MO 65102-1469
info@dhe.mo.gov

**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

**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

**New Jersey**
New Jersey Higher Education
PO Box 542
Trenton, NJ 08625
nj_che@che.state.nj.us
http://www.state.nj.us/highereduction/OSHEComplaintInstructions.shtml
New Jersey Division of Consumer Affairs
124 Halsey Street,
New Jersey 07102

**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.html

**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**
Director of Distance Education and State Authorization
North Dakota University System
1815 Schafer St., Ste. 202
Bismarck, ND 58501-1217
tanya.spilovoy@ndus.edu
http://www.ndus.edu/system/state-authorization/

**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

**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/ocomp.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.pa.gov/Documents/Postsecondary-Adult/College%20and%20Career%20Education/Private%20Licensed%20Schools/Student%20Complaint%20Form.pdf
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 Office of the Postsecondary Commissioner
Shepard Building, 80 Washington Street, Suite 524
Providence, RI 02903
Rhode Island Department of Attorney General, Consumer Protection Unit
General Information

150 South Main Street
Providence, RI 02903
http://www.riopc.edu/static/photos/2016/03/10/StudentComplaint_full_120215.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/assets/entities/thec/attachments/ComplaintForm.pdf

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
https://www1.thecb.state.tx.us/WWW/comments/Office of the Attorney General, Consumer Protection Division
PO Box 12548
Austin, TX 78711-2548
https://www.texasattorneygeneral.gov/cpd/file-a-consumer-complaint

Utah
Utah Division of Consumer Protection
160 East 300 South
Salt Lake City, Utah 84111
consumerprotection@utah.gov
http://consumerprotection.utah.gov/complaints/index.html

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
http://www.schev.edu/students/studentcomplaint.asp

Washington
Washington Student Achievement Council
917 Lakeridge Way
PO Box 43430
Olympia, WA 98504-3430
complaints@wsac.wa.gov
http://wsac.wa.gov/protecting-education-consumers

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

Nondiscrimination and EEO Policy
Syracuse University is an equal-opportunity, affirmative action institution. We do not discriminate on the basis of race, creed, color, gender, national origin, citizenship, religion, marital status, age, disability, or perceived disability, sexual orientation, actual or perceived sex, gender identity or expression, disability status, status as a disabled veteran or a veteran of the Vietnam era or any other status protected by applicable law to the extent prohibited by law. This nondiscrimination policy covers admissions, employment, and access to and treatment in University programs, services, and activities.

Syracuse University welcomes people with disabilities and in compliance with Section 503/504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act, does not discriminate on the basis of disability. Services for students with disabilities are coordinated by the Office of Disability Services, Room 309, 804 University Avenue, 315-443-4498 (VOICE), 315-443-1371 (TDD).

Syracuse University supports equal opportunity in compliance with Title VI and Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, and does not discriminate on the basis of race, color, national origin, or gender.

Questions about any of the University's equal opportunity policies, including compliance with Title VI, Title VII, and Title IX, may be directed to the Interim Chief, Equal Opportunity and Title IX Officer, Sheila Johnson-Willis, 005 Steele Hall, Syracuse University, Syracuse NY 13244-5300; telephone 315-443-0211.
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 three-year 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.

Academic Rules

These rules and regulations are based on the requirements of the Graduate School. Departments, schools, and colleges may have additional rules that apply, that may be more restrictive. Academic rules and regulations for the College of Law may be found on their website. The general rules contained in the Undergraduate Academic Rules and Regulations also apply to graduate students.

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:

- Syracuse University Policies
- Financial Aid Home
- Student Handbook
- SU Abroad
- Tuition, Fees & Related Policies

Academic Record

19.0 Advanced Credit Examinations

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 Syracuse University 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 Advanced Credit Exam is B.

20.0 Transfer Credit

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

- earned at another nationally 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 Syracuse University 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.

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

School/College Rules

<table>
<thead>
<tr>
<th>School/College</th>
<th>Information Studies</th>
<th>Management</th>
<th>Maxwell</th>
<th>Public Communications</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A minimum grade of B is required in any transferred course, and credits from courses transferred must have been earned within seven (7) years of when the student is going to graduate with their school degree. If international students have a non-STEM visa coming into a STEM program at the School, or are transferring into a program with a higher or lower number of credits needed to graduate, the student must notify the Slutzker Center for International Services so that the Center can report the facts of the student’s present situation to US Immigration for potential visa adjustment. Students may transfer a maximum of six credits of elective courses into the M.S. program in information management, or the M.S. program in Library and Information Science, from outside of the School or University. Students may transfer up to a maximum total of 15 credits from certain institutions to the M.S. program in information management as follows: From the National Defense University. From the US Army Signal Center School. Students may transfer a maximum of six credits of elective courses into their M.B.A. or M.S. program from another AACSB-accredited business school. Students must file a petition and receive approval prior to taking the course. Grades from these courses will not be transferred, nor will they count toward the GPA. A grade of B or better is required in the transfer course. Up to 12 credits from Tsinghua University may be applied to the executive master of public administration. A maximum of 20 percent of credits counted toward any master’s degrees in the S.I. Newhouse School of Public Communications may be transferred: advertising; arts journalism; broadcast and digital journalism; communications management; documentary film and history; magazine, newspaper &amp; online journalism; media management; photography; public relations; and television, radio &amp; film.</td>
<td></td>
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</table>
21.0 Graduate Students Taking Undergraduate-Level Courses
Prior 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. However, an undergraduate-level course does not fulfill graduate degree requirements.

22.0 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.

23.0 Conversion to Graduate Credit
A student may apply to have up to 12 credits of restricted graduate credit converted to graduate credit if the student meets all of the following conditions:
• becomes matriculated in a graduate degree or certificate program
• overall average in all Syracuse University graduate work is at least 2.8
• earned a B or better in each course
• courses are part of a degree or certificate program approved by the student’s department
• coursework has been completed within the time limit allowed for the degree
Restricted graduate credit earned during the term in which the student became matriculated in the Graduate School is converted automatically to graduate credit.

24.0 Retaking Courses
Graduate Students may retake a course in which he/she earned a grade of C+, C, C- or F, with the approval of his/her department/college and the Graduate School. Graduate courses may be retaken only once. A repeated course replaces the original course on the student’s degree program of study, but both the original course and the repeated course will appear on the student’s transcript and both courses will calculate, unless the original course is flagged.

25.0 Flagging Courses
A student may petition his/her department/college to flag the following:
• undergraduate or remedial courses that are not part of the student’s graduate program, such as English as a Second Language
• courses taken while non-matriculated
• when officially changing degree programs, courses that do not apply to the student’s new degree program under certain conditions.
• when retaking a course in which the student earned a grade of C+, C, C- or F, with the approval of his/her department/college.
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.)

26.0 Grades

P/F (Pass/Fail)
Graduate students may only receive pass/fail grades for courses designated as pass/fail.

Academic Status

27.0 Minimum GPA to Continue Graduate Work
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.

28.0 Student Status

Full-time
A graduate student is considered full time under any one of the following conditions:
• 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)
• 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.
• studying for preliminary, qualifying, or comprehensive exams
• studying for a language or tool requirement
• actively working on a thesis or dissertation
• an internship

If the student is not registered for any coursework, including registration for master's thesis or doctoral dissertation credits, the student must be registered for GRD 998 Degree in Progress.
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.
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.
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.

### Academic Actions

#### 29.0 Internal Transfer

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. Internal transfer requests must be received before the financial drop deadline of the current term.

#### Degree and Certificate Programs

**30.0 Graduate Degree and Certificate Programs**

Master's degree candidates must take at least 70 percent of Syracuse University credit hours for the degree. 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 a Syracuse University registered graduate degree program. Experiential learning credit and professional experience courses don’t count toward the residency requirement.

**31.0 Master’s Degrees**

**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 School.

**Time to Degree**

Students must meet all requirements for the master's degree within seven years from the time the student registers for the first course to be used in the master's degree program. If a student does not meet this requirement, the student may petition his/her school/college for reinstatement of credits that were completed outside the seven-year timeframe.

### Comprehensive Examinations

The student’s school/college will determine the nature of any comprehensive examination or examinations that apply toward his/her master's degree. Such exams may or may not be directly related to the content of particular courses that the student has taken.

#### Oral Examination

An oral examination committee consists of four voting members that include a chairperson, thesis or area of study advisor, and other specialists in the subject area. The school/college will conduct the examination in the manner it considers most effective; the student should contact his/her 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 regulations and declared policies are followed.

The student’s 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.

### 32.0 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 the student’s 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 the student’s 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

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

### Advancement to Candidacy/Time to Degree

The student will be admitted to candidacy when he/she has 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 the student matriculated into the doctoral program. The student’s department/college must notify the Graduate School when he/she has 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 the student is admitted to candidacy.

#### Exceeding Time to Degree Requirements

If the student has exceeded the seven-year limit for achieving ABD status, the student must register for GRD 991, which requires a minimum of one credit hour per semester, each fall and spring semester until ABD status is achieved. If the student fails to register for GRD 991, for a given term, the student will be withdrawn from the program.

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

### Dissertation Advisor

A faculty member from the department or program will be identified as the student’s dissertation advisor. The dissertation advisor should be a Syracuse University tenured or tenure-track faculty member in the program of study of student’s dissertation. In exceptional cases, where faculty emeriti or others with outstanding qualifications in the student’s area of research will direct the dissertation, a member of the Syracuse University faculty from the department/college must jointly oversee the preparation of the student’s dissertation.

#### Oral Examination

The academic unit appoints a six-member oral examination committee, including a chair, at the recommendation of the student’s 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 Syracuse University 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.

The student’s dissertation advisor will be a committee member. Other committee members should be tenured or tenure-track Syracuse University faculty members. One external member
can be included, based on subject-matter expertise; however, this committee member cannot be a personal acquaintance. The student must petition to include more than one external committee member.

Prior to the exam, the Graduate School must verify that the student has been admitted to candidacy, and that all supporting documentation has been filed. The student's dissertation advisor and academic unit will determine the scheduling of the exam with the approval of the Graduate School. 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:
  - the result of the vote, with signatures of approval and appropriate comments;
  - comments on the quality of the examination; and
  - 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:
  - that committee member must submit questions and/or comments in writing to the chair in advance; and
  - 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:
  - pass
  - pass with minor revisions (generally editorial)
  - pass with major revisions (substantive)
  - not pass

The student is entitled to an explanation from the committee concerning the outcome of the defense.

### 33.0 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.

### 34.0 Counting Credits Toward 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:

The student must be admitted to the degree program in each of the awarding department/college.

In no instance shall course credit be counted more than twice in satisfaction of the requirements for multiple degrees and/or programs.

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 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.).

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 Syracuse University concurrent study**

Syracuse University and SUNY ESF have agreements that encourage concurrent master's study in environmental science and forestry with Syracuse University degree work in public communications, law, management, public administration, and certain education programs. Other Syracuse University fields may also qualify. Students should contact the school/college, the Graduate School and SUNY ESF for specific requirements and procedures regarding concurrent degree work and counting of credits.

### 35.0 Diplomas and Certificates

Reference general academic rule section Diplomas and Certificates.

**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.
Other Programs

**English Language Institute**
Deb McGraw, Associate Director
700 University Avenue, 315-443-8571
FAX: 315-443-1530
elmail@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, TESOL).

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. 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 Research Program
- Ruth Meyer Undergraduate Research Scholars Program

**Funding opportunities:**
ILEARN has funds available for use by arts and sciences undergraduate students, faculty, and departments/projects 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
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 cocurricular 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 components of service learning courses provide opportunities for academic learning in community settings. 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 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 or engaging in a semester-long project. 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 first-come, 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 University Honors Program**
Professor Chris Johnson, Interim 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:
GLOBAL AWARENESS (two of the following ten options; at least one must be non-Euro-centric in its focus):

One course that has a non-US focus (other than language courses);
A Capstone Project that has a non-US focus;
Ability in a foreign language at a level of 201 or higher;
An internship or other work with a documented global perspective for at least 50 hours;
A semester or summer abroad in a University-approved foreign study program;
An Honors-approved, short-term program that includes a foreign travel component (see examples at: http://suabroad.syr.edu/destinations/short-term-programs/)
At least one semester of residence in a Learning Community with an international focus.
Participation in the University’s Maxwell in Washington Undergraduate Semester residency program (IR/DC);
An approved, sustained, reciprocal mentoring partnership with international students for one semester under the aegis of the Slutzker Center for International Services; or
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-Euro-centric.

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:
An approved course that involves substantial teamwork; or
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);
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 first-year 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. Timothy Kimbrough (effective change 7/15/2016)
Professor of Aerospace Studies

122 Lyman Hall, 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/O&M 405 and ASC 306/O&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, basic-course 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

### Other Programs

#### Professional Officer
- ASC 301,302/401,402
- ASC 305/O&M 405
- ASC 306/O&M 406
- ASC 405/PAF 475
- ASC 406/PAF 476

#### Military Science Courses
- MSL 101,102,201,202
- MSL 301,302,401,402
- 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 ssu@syrs.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@syrs.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.
Undergraduate Research

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.

Contact

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

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 (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)

Second Quarter-Fall (15 credits)

- MBC 638 - Data Analysis and Decision Making 3 credit(s)
- PPA 730 - Dispute Resolution for Public Managers 3 credit(s)

Third Quarter-Winter and Spring (18 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)

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)
Other Programs

- 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         | 200-299 |
| Junior- and senior-level courses| 300-499 |
| Joint undergraduate- and graduate-level courses | 500-599 |
| First-year graduate-level courses | 600-699 |
| Second- and third-year graduate-level courses | 700-899 |
| Readings, research, and individual study courses at the doctoral level only | 900-996 |
| Master's thesis                 | 997     |
| Individualized study program    | 998     |
| Doctoral dissertation           | 999     |

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

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 All-University 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.

- 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.

- 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. SU Abroad obtains approval from the SU academic department to award SU credit and to assign the course level. Students register for the course at the foreign institution and is graded according to the educational institution's practice. Grade is taken from the foreign institution-issued transcript, with a conversion scale used where appropriate.

- **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

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Lower-division</th>
<th>Upper-division</th>
<th>Joint undergraduate-and graduate-level</th>
<th>1st year graduate</th>
<th>Advanced graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected topics</td>
<td>100, 200</td>
<td>300, 400</td>
<td>500</td>
<td>600</td>
<td>900</td>
</tr>
<tr>
<td>Experience credit</td>
<td>170, 270</td>
<td>370, 470</td>
<td>570</td>
<td>670</td>
<td>970</td>
</tr>
<tr>
<td>International</td>
<td>180, 280</td>
<td>380, 480</td>
<td>580</td>
<td>680</td>
<td>980</td>
</tr>
<tr>
<td>Independent study</td>
<td>190, 290</td>
<td>390, 490</td>
<td>590</td>
<td>690</td>
<td>990</td>
</tr>
<tr>
<td>Honors thesis</td>
<td></td>
<td>499</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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
educational standards.

or two-year term of accreditation, depending on program may be granted an eight-year, three-year, architecture offered by institutions with U.S. Board (NAAB), which is the sole agency authorized professional degree program as a prerequisite for

In the United States, most state registration Accreditation Board (NAAB).

M.Arch - (110 credit hours)

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

Graduate Education

Chair Brian Lonsway, 225 Slocum Hall

Contact Lauren Mintier, 225 Slocum Hall, (315) 443-1041

Founded in 1873, the Syracuse University School of Architecture provides a diverse and intensive approach to the design of the built environment. The program is committed to providing rigorous professional training and, simultaneously, emphasizes the creative and intellectual foundations of the discipline. The integrated curriculum is designed to prepare students to unite design, research, and technical understanding. Architecture is a dynamic profession, and like the society in which it functions, increasingly complex and fluid. The program seeks to respond with skill, intellect, and passion to the challenges and opportunities of contemporary practice.

Students benefit from extensive one-on-one communication with dedicated professors, in both formal reviews and informal interactions. 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. For a complete listing of faculty members affiliated with the School of Architecture, see the faculty listings under Master of Architecture programs.

The school hosts lectures, symposia, and exhibitions featuring leading practitioners, critics, and scholars. As part of a major liberal arts university, students in the School of Architecture have access to a wide variety of courses throughout the campus and have the opportunity to broaden their intellectual and creative foundation. Students are encouraged to participate in the cultural and social life across the wide spectrum of offerings on campus and in the city of Syracuse.

The Syracuse Architecture M.Arch. is a fully accredited professional degree open to students with non-architecture as well as architecture backgrounds. The Syracuse Architecture Master of Science Research Program supports independent, timely, and innovative research projects in the field of architecture and urbanism. Applications to this program require a brief research proposal.

Assistantships

In addition to the awards and financial aid described in the graduate prospectus, graduate assistantships are available with responsibility in the areas of teaching or research, depending on the needs of the school and faculty. To qualify, students must have appropriate experience, mainly in the areas of design, architectural history, theory, building technology, drawing, structures, and computing. For further information about our Graduate programs, visit our website.

Off Campus Programs

The Programs

Syracuse Architecture offers opportunities for advanced-level architecture students to spend a semester studying in one of our off-campus centers - New York City, Florence, or London. Graduate students typically study off-campus for a semester after completing the ARC 607 studio. 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 18th-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
Short-term/summer off-campus 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 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) 443-3324 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.

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 generation; video production; and GIS mapping. Manipulation; desktop publishing; web page visualization, rendering and animation; image of applications: 2D and 3D drafting; modeling, of the art software is available for a wide range connected to their own network and servers. State

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.

Architecture First-Professional, M.Arch
Lauren Mintier, Graduate Program Manager
225 Slocum Hall
ph. (315) 443-1041
e.lmintier@syr.edu
Chair Brian Lonsway, 225 Slocum Hall

Faculty

Program Description
The Syracuse Architecture M.Arch is a fully accredited professional degree that aims to produce architects who not only provide leadership and vision in the construction of the physical environment, but collaboratively draw upon and organize diverse professions and multiple technologies to expand the field of architectural design. Research is an integral part of the course of study, from the first year of courses in design, theory, history, representation, and technology, to the final semester's thesis project.

Degree Awarded
This is a 110 credit program leading to an M.Arch degree.

Prerequisites for Admission into the M.Arch Program
The program is open to students with an undergraduate degree in a field other than architecture, or with a non-professional degree in architecture or environmental studies. For those students with no architecture background, the program will require seven semesters to complete. The program seeks students with a wide range of experiences; applicants with some background in the arts or design are preferred. Graduates of non-professional architecture and environmental studies degree programs may be awarded as many as 33 credits (approximately one year) of advanced standing in the program (see Advanced Standing section). The completed application form must be accompanied by an official copy of prior academic transcripts, three letters of recommendation, a portfolio of academic and professional work, and a brief statement of interests and objectives. GRE scores are required. TOEFL scores are required for all applicants whose native language is not English.
Major Requirements

Design Courses

- ARC 604 - Architectural Design I 6 credit(s)
- ARC 605 - Architectural Design II 6 credit(s)
- ARC 606 - Architectural Design III 6 credit(s)
- ARC 607 - Architectural Design IV 3-6 credit(s)
- ARC 608 - Architectural Design V 6 credit(s)
- ARC 609 - Architectural Design VI 6 credit(s)
- ARC 998 - Design VII-Thesis 1-9 credit(s)

Professional Core Courses in media, history, theory, structures and technology

- ARC 585 - Professional Practice 3 credit(s)
- ARC 611 - Structures I 3-4 credit(s)
- ARC 612 - Structural Systems Design II 3-4 credit(s)
- ARC 621 - Building Systems Design I 3-4 credit(s)
- ARC 622 - Building Systems Design II 3-4 credit(s)
- ARC 623 - Advanced Building Systems 3-4 credit(s)
- ARC 631 - Studies in Architectural Histories 3 credit(s)
- ARC 639 - Architectural History Principles 3 credit(s)
- ARC 641 - Introduction to Architecture 3 credit(s)
- ARC 642 - Architectural Theory & Methods 3 credit(s)
- ARC 650 - Architectural Research 1 credit(s)
  Taken each semester, excluding final semester.
- ARC 681 - Media I 3 credit(s)
- ARC 682 - Media II 3 credit(s)

History Electives

Six credits of History Electives are required for graduation.

- ARC 500 - Selected Topics 1-6 credit(s)
  Selected Topics in Architecture (if taught by a Historian)
- ARC 600 - Selected Topics 1-6 credit(s)
- ARC 632 - Sixteenth Century Italian Architecture 3 credit(s)
- ARC 634 - The Architecture of Revolutions 3 credit(s)
- ARC 635 - Early Renaissance Architecture in Italy 1400-1529 3 credit(s)
- ARC 637 - American Architecture, Settlement to 1860 3 credit(s)
- ARC 638 - American Architecture, 1860 - World War I 3 credit(s)
- ARC 731 - Early Modern Architecture 3 credit(s)
- ARC 732 - The City in Architectural History 3 credit(s)
- ARC 735 - Islamic Architecture 3 credit(s)
- ARC 736 - Modern Architecture: The International Style to Present 3 credit(s)
- ARC 737 - French Architecture, Sixteenth and Seventeenth Centuries 3 credit(s)

Professional Electives

Fifteen credits of professional electives are required for graduation.

- ARC 500 - Selected Topics 1-6 credit(s)
- ARC 511 - Advanced Structural Resolution 3 credit(s)
- ARC 536 - Italian Urbanism: 100 Cities 3 credit(s)
- ARC 537 - Italian Medieval Architecture and Urbanism 3 credit(s)
- ARC 538 - Artistic Patronage of Medici 3 credit(s)
- ARC 539 - Italian Architecture, 1909-1959 3 credit(s)
- ARC 555 - Intro to Building Information Modeling 3 credit(s)
- ARC 556 - Rem Koolhaas: Architect, Historian, Provocateur, Document Maker 3 credit(s)
- ARC 557 - Utopia: Design and Cultural Imagination 3 credit(s)
- ARC 563 - Introduction to Computer Applications in Architecture 2-3 credit(s)
- ARC 568 - Real Estate Design and Development 3 credit(s)
- ARC 566 - Introduction to Preservation 3 credit(s)
- ARC 567 - Dwelling and the Modern Home 3 credit(s)
- ARC 571 - Survey of Italian Architecture 3 credit(s)
- ARC 572 - Advanced Computer Applications to Architecture 2-3 credit(s)
- ARC 573 - Utopia and Transformation in Early American Town Planning 3 credit(s)
- ARC 574 - Reading the Landscape 3 credit(s)
- ARC 575 - Urban Housing - Building, Block, Street 3 credit(s)
- ARC 576 - Theories & Analysis of Exurbia 3 credit(s)
- ARC 577 - Visual Studies 3 credit(s)
- ARC 578 - Facade as Idea 3 credit(s)
- ARC 600 - Selected Topics 1-6 credit(s)

Additional Information

An additional 6 open elective credits are required.

Study Abroad

Students enrolled in the M.Arch program are eligible for off campus study in our studio based programs in NYC, Florence and London after completing 2nd year 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.

Advanced Standing

M.Arch applicants who have completed or are about to complete an undergraduate degree in a non-professional program in architecture or environmental studies may apply for advanced standing in design. Advanced standing is determined after a complete review of the applicant's portfolio by representatives of the faculty who teach in the areas of design, history, technology, structures, and representation.

Students who are accepted with advanced standing will receive credit for the first two design studios (ARC 604 and ARC 605).

They may also receive credit for demonstrated competence in the content/design areas represented by required (not optional or professional elective courses) courses in the M.Arch curriculum that duplicate courses taken while fulfilling their undergraduate degree requirements at accredited institutions if a grade of “B” or better was earned. Students can determine if their previous academic courses duplicate required courses offered in the School of Architecture by reading the course descriptions in the SU catalog or on the School's web site.

A total of 6 credits earned from coursework completed as an undergraduate in excess of the total required for the bachelor's degree, provided that the work is graduate level and has been completed with a grade of “B” or better may be transferred. Total advanced standing credit may not exceed 33 credits. A maximum of 30% of credits counted toward a master’s degree at Syracuse University may be accepted from another institution.

Architecture, MS

Lauren Mintier, Graduate Program Manager
225 Slocum Hall
ph. (315) 443-1041
e. lmintier@syr.edu
School of Architecture

Chair
Brain Lonsway, 225 Slocum Hall

Faculty

Program Description
The Syracuse Architecture Master of Science Research Program seeks theoretically or speculatively inclined architects and emerging scholars whose research can be applied to pressing contemporary problems and opportunities. This two semester, 30-credit course of study admits a limited number of students whose areas of interest can be matched with the expertise and ongoing research of the school’s faculty. The program encourages transdisciplinary research that explores the capacity of architecture to engage new constituencies or operate in new contexts, although the range of possible projects is as diverse as the faculty’s interests.

Degree Awarded
This is a 30 credit program leading to a Master of Science in Architecture degree.

Prerequisite for Admission into the M.S. in Architecture Program
Applicants should articulate a distinct topic in a brief statement of interest and elaborate on their current research skills and prior experience in the field. Students accepted to the program will define their project more precisely in discussion with a faculty advisor in the months prior to enrollment. Instruction occurs in a variety of formal settings including self-directed studios, independent study, and graduate-level courses offered in the School of Architecture or other units of Syracuse University, where cross-disciplinary interaction and exchange are strongly supported and encouraged. The program concludes with a symposium in Syracuse, where students present the results of their design work and research.

The program is open to qualified students with a professional degree in architecture (B.Arch or M.Arch, or equivalent) or with demonstrable research skills and work in architecture or related fields. The completed application form must be accompanied by an official copy of prior academic transcripts, three letters of recommendation, a portfolio of academic and professional work, and a brief research proposal outlining clear intellectual interests and educational objectives and demonstrating preparedness for the demands of the program. GRE scores are highly recommended, but not required. TOEFL scores are required for all applicants whose native language is not English.

Major Requirements
Students will complete 30 credit hours of course work. Students work closely with their advisors and the graduate program chair to determine which courses they should take to develop their research project.

All master’s students must present a final project to their committee members representing a culmination of what they have learned in their research.

Study Abroad
Students interested in off campus study should discuss how off campus study can enhance their research project with their advisor and the graduate program chair. Requests for off campus study will be considered on a case-by-case basis.

Note
Please note that this program does not meet the licensure requirements to become an architect in New York and is not considered licensure qualifying in New York.
**School of Architecture**

**Faculty**

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  
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  
M.Arch., Princeton University, 1981; B.Arch., University of Virginia, 1978  
Architectural Design and Theory

Lawrence Chua, Assistant Professor  
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; Chair, Undergraduate Program  
M. Arch., Columbia University, 1988; B.Arch., University of Cincinnati, 1985  
Architectural Design; Registered Architect in NY State, NCARB

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.  
Architectural Design, University of Southern California, 1978  
Architectural Design

Susan Henderson, Professor  
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

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; Chair, Graduate Program  
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 Faculty Ph.D., Princeton University, 2006; B.A.I., Trinity College, University of Dublin, 1999  
Civil and Environmental Engineering

Kyle Miller, Assistant Professor; Program Director, Florence  
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  
M.Arch., Harvard University, 1993; B.Arch Syracuse University, 1988;  
Architectural Design

Francisco Sanin, Professor  
Diploma, Universidad Pontifica Bolivariana (Colombia), 1979  
Architectural Design, Urban Design

David Shanks, Assistant Professor  
Architectural Design

Yutaka Sho, Associate Professor  
Architectural Design

Michael Speaks, Professor, Dean  
Ph.D., Duke University, 1993; B.A., University of Mississippi, 1983  
Architectural Design and Technology; low-energy building research

Robert Svetz, Assistant Professor  
M.Arch., Yale University, 2002; B.Arch., New Jersey Institute of Technology, 1994  
Architectural Design and Technology

Fei Wang, Assistant Professor  
M.Arch. History of Theory, McGill University, 2007; M.Arch., Virginia Tech, 2005; B.Arch., Tongji University, 2003  
Architectural Design and History
School of Architecture Courses

Architecture

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 322) OR (ARC 612 AND ARC 622)) AND ((ARC 408 OR (ARC 608 WITH MINIMUM GRADE C))

ARC 508 - Architectural Design IX-Thesis
School of Architecture
6 credit(s) At least 1x fall or spring
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 511 - Advanced Structural Resolution
School of Architecture
3 credit(s) At least 1x fall or spring
Structural analyses to compare and contrast design solutions for a given project. Presents appropriate techniques, regulatory codes and software to facilitate such analyses and subsequent design decisions. PREREQ: ARC 311 OR ARC 612

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: 100 Cities
School of Architecture
3 credit(s) Every semester
Crosslisted with: HFA 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 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/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
This lecture/seminar course examines the work of contemporary Dutch architect Rem Koolhaas, investigating its historical lineage, response to cultural context, and typological innovation.

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 small-scale construction experiments, conducted in both physical and digital realms, advanced components, materials and systems. PREREQ: ARC 208

ARC 555 - Introduction to Building Information Modeling
School of Architecture
3 credit(s) At least 1x fall or spring
Introduction to uses of Building Information Modeling in architecture through a series of case studies or drawing and analysis of building components in real time demonstrations.

ARC 556 - Rem Koolhaas: Architect, Historian, Provocateur, Document Maker
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 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, metropolises, and spectacle. PREREQ: HOA 105 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 408 OR ARC 608 OR ARC 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 - Material Manifestations
School of Architecture
3 credit(s) Irregularly
Innovative methodologies of detailing and constructing architectural façade and structural systems completed via analysis and small-scale construction experiments, conducted in both physical and digital realms, advanced components, materials and systems. PREREQ: ARC 208

ARC 565 - Rem Koolhaas: Architect, Historian, Provocateur, Document Maker
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 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 567 - Dwelling and the Modern Home
School of Architecture
3 credit(s) Upon sufficient interest

ARC 568 - Real Estate Design and Development
School of Architecture
3 credit(s) At least 1x 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 ARC 608 OR ARC 609

ARC 572 - Advanced Computer Applications to Architecture
School of Architecture
2-3 credit(s) At least 1x 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.

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 ARC 607

ARC 579 - 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

ARC 600 - Selected Topics
School of Architecture
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

ARC 604 - Architectural Design I
School of Architecture
6 credit(s) At least 1x fall or spring
Introduction to design techniques, processes, and issues including spatial organization, program, site, materials, structure, and assembly. Exercises and projects emphasize conceptual development and initiate engagement with technological issues.

ARC 605 - Architectural Design II
School of Architecture
6 credit(s) At least 1x fall or spring
Further development of design techniques and processes, including conceptual development through modeling, site analysis, fabrication, and systems integration.
PREREQ: ARC 604

ARC 606 - Architectural Design III
School of Architecture
6 credit(s) At least 1x fall or spring
Architectural design in relation to the city and landscape. Exercises and projects emphasize environmental, economic, cultural, social and political issues as factors in design.
PREREQ: ARC 605

ARC 607 - Architectural Design IV
School of Architecture
3-6 credit(s) At least 1x fall or spring
Integration of skills and knowledge in a building design that comprehensively addresses program, site building codes and contemporary technologies.
PREREQ: ARC 606

ARC 608 - Architectural Design V
School of Architecture
6 credit(s) At least 1x fall or spring
Continuation of ARC 607. Project development. Choice of studio by permission.
PREREQ: ARC 607

ARC 609 - Architectural Design VI
School of Architecture
6 credit(s) At least 1x fall or spring
PREREQ: ARC 608 WITH MINIMUM GRADE OF C

ARC 611 - Structures I
School of Architecture
3-4 credit(s) At least 1x fall or spring
Introduces basic concepts of structural system behavior: gravity and lateral loads, analysis of major structural forms, and structural performance of materials. Evaluation to include a research project.

ARC 612 - Structural Systems Design II
School of Architecture
3-4 credit(s) At least 1x fall or spring
Design of structures; choice of appropriate materials and system, design of structural components in concrete, timber and steel. Introduction to earthquake loads, high rise, pre-stressed concrete, and indeterminate structures. Evaluation to include research project.

ARC 621 - Building Systems Design I
School of Architecture
3-4 credit(s) At least 1x fall or spring
Introduces materials and methods of building construction, basic building assemblies, and their elements. Energy conservation and conformance to regulatory codes also addressed.
ARC 622 - Building Systems Design II
School of Architecture
3-4 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 621

ARC 623 - Advanced Building Systems
School of Architecture
3-4 credit(s) Every semester
Case studies of the interrelationship of design concepts with constructional, structural, and mechanical systems. Lecture and studio. Evaluation to include a research project.
PREREQ: ARC 612 AND ARC 622

ARC 631 - Studies in Architectural Histories
School of Architecture
3 credit(s) At least 1x fall or spring
Studies of global architectural histories.

ARC 632 - Sixteenth Century Italian Architecture
School of Architecture
3 credit(s) Every semester
Double Numbered 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: ARC 639

ARC 634 - The Architecture of Revolutions
School of Architecture
3 credit(s) At least 1x fall or spring
Crosslisted with: HOA 654
Double Numbered with: ARC 334
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 635 - Early Renaissance Architecture in Italy 1400-1529
School of Architecture
3 credit(s) Every semester
Double Numbered with: ARC 335
Architectural theory and design in Italy, 1400-1520. Additional work required of graduate students.
PREREQ: ARC 639

ARC 636 - Italian Seventeenth Century Architecture
School of Architecture
3 credit(s) Irregularly
Double Numbered 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.

ARC 637 - American Architecture, Settlement to 1860
School of Architecture
3 credit(s) Irregularly
Double Numbered 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 639

ARC 638 - American Architecture, 1860 - World War I
School of Architecture
3 credit(s) Irregularly
Double Numbered 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 639

ARC 639 - Architectural History Principles
School of Architecture
3 credit(s) At least 1x fall or spring
Examination of the principles of architectural history through study of selected buildings and movements.

ARC 641 - Introduction to Architecture
School of Architecture
3 credit(s) At least 1x fall or spring
An introduction to basic definitions and concepts of architecture as an intellectual and physical discipline, and as an expression of established and emerging cultural values.

ARC 642 - Architectural Theory & Methods
School of Architecture
3 credit(s) At least 1x fall or spring
Introduction to architectural theory, presented as precise and distinct modes of speculation based in research. It will develop skills necessary to define, conduct, and present research work and how it informs design practice.
PREREQ: ARC 641

ARC 650 - Architectural Research
School of Architecture
1 credit(s) Every semester
Selected approaches to architectural research. Repeatable 4 time(s), 5 credits maximum

ARC 651 - Language and Discourse in Architecture
School of Architecture
3 credit(s) At least 1x fall or spring

ARC 652 - Media I
School of Architecture
3 credit(s) At least 1x fall or spring
Introduction to the use and implications of analogue and digital media. Students will learn fundamental skills and develop innovative applications for diverse drawing techniques and other media.

ARC 658 - Media II
School of Architecture
3 credit(s) At least 1x fall or spring
Continued study of architectural media with emphasis on capacities and techniques of modeling, including advanced digital design and fabrication.
PREREQ: ARC 681

ARC 690 - Independent Study
School of Architecture
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

ARC 700 - 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 707 - Architectural Design
School of Architecture
9 credit(s) Irregularly
M.S. in Architecture graduate design studio dealing with urban architectural problems. Conducted primarily by adjunct faculty.

ARC 708 - Architectural Design
School of Architecture
9 credit(s) Irregularly
M.S. in Architecture graduate design studio dealing with urban architectural problems. Conducted primarily by adjunct faculty.
PREREQ: ARC 707

ARC 731 - Early Modern Architecture
School of Architecture
3 credit(s) Irregularly
Double Numbered with: ARC 431
Early modern architecture from the 1890s through the 1930s. Additional work required of graduate students.
PREREQ: ARC 639

ARC 732 - The City in Architectural History
School of Architecture
3 credit(s) Irregularly
Double Numbered 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: ARC 639

ARC 734 - London's Built Environment
School of Architecture
3 credit(s) At least 1x fall or spring
Double Numbered with: ARC 434
Presents a social and political history of the built environment in London, focusing on times of destruction and (re)construction. Additional work required of graduate students.
ARC 735 - Islamic Architecture  
*School of Architecture*  
3 credit(s) Irregularly  
Double Numbered 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: ARC 639

ARC 736 - Modern Architecture: The International Style to Present  
*School of Architecture*  
3 credit(s) Irregularly  
Double Numbered 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: ARC 639

ARC 737 - French Architecture, Sixteenth and Seventeenth Centuries  
*School of Architecture*  
3 credit(s) Irregularly  
Double Numbered 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: ARC 639

ARC 770 - Architectural Research  
*School of Architecture*  
3-8 credit(s) Irregularly  
Individual or group research into particular aspects or problems in architecture, under supervision of the faculty.  
Repeatable

ARC 998 - Design VII-Thesis  
*School of Architecture*  
1-9 credit(s) Every semester  
A major, semester-long, final design project initiated and based on a program produced by the student and accepted by the faculty.  
PREREQ: ARC 505 WITH MINIMUM GRADE C AND ARC 623  
Repeatable 1 time(s), 9 credits maximum
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

Graduate Studies

The College of Arts and Sciences offers a number of graduate degree programs in the Humanities and in the Natural Sciences and Mathematics. Graduate programs in the Social Sciences are offered by the Maxwell School of Citizenship and Public Affairs. Graduate applications are submitted through Syracuse University’s Graduate School.

For a list of Graduate Programs please refer to the Academic Offerings.

Applied Statistics, MS

Contact:
Pinyuen Chen, Advisor
pinchen@syr.edu
215 Carnegie
315-443-1577

Faculty


A graduate program in applied statistics leading to a master’s degree is administered by the interdisciplinary Statistics Program. This program includes professors from computer and information science, education, engineering, management, mathematics, psychology, and the social sciences, among others. This program is distinguished from other graduate programs in statistics by its emphasis on applications. The interdisciplinary program in statistics is based in the College of Arts and Sciences, but welcomes students from all schools and colleges at Syracuse University. Included among these may be students who are pursuing other degrees, but might wish also to pursue the M.S. degree in statistics.

Admission

All applicants are expected to have a basic foundation in statistical training that includes one course in introductory statistics, one course in regression analysis, and four courses in applications areas. Graduate Record Examination scores, or their equivalent, and performance in a student’s undergraduate degree program will be carefully evaluated.

Applicants who are not currently enrolled in any program at Syracuse apply for admission to the Applied Statistics Master’s degree program through http://www.syr.edu/gradschool/em/future_howtoapply.html by March 15. Students who are currently enrolled at Syracuse University should contact Professor Pinyuen Chen at pinchen@syr.edu for further information.

M.S. Degree

The master’s degree in applied statistics requires completion of 33 graduate credits. Each candidate must submit a coherent program of 11 courses beyond the bachelor’s degree, subject to the following requirements.

Within the first semester after admission to the degree program, the students will plan their course of study in consultation with their advisors and submit it for approval to the Statistics Program Director.

In order to graduate, a student must earn (1) at least a 3.0 grade in each of the four core courses, (2) a GPA of 3.0 or better in this program of study leading to the M.S. in applied statistics, and (3) no more than two Cs in his/her statistics program coursework.

The absence of either a comprehensive final examination or a master’s thesis is compensated for by an additional 3 credits of coursework, represented by STT 690 or STT 750 / MAT 750, whose objective is to apply knowledge of statistics to some real world problem.

Four Core Courses

All candidates for the degree program must complete the following set of four core courses (12 credits):

MAT 521 - Introduction to Probability 3 credit(s)
(students with a strong mathematics background are to take MAT 651).

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
Religion
Science Teaching
Sociology
Women’s and Gender Studies

The Writing Program

More Information:
On the Web:
The College of Arts and Sciences

Dean’s Office
300 Hall of Languages
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E-mail: casdean@syr.edu

Faculty


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English
Geography
History
International Relations
Languages, Literatures, and Linguistics
Mathematics
Philosophy
Physics
Political Science
Psychology
Religion
Science Teaching
Sociology
Women’s and Gender Studies

The Writing Program

More Information:
On the Web:
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The absence of either a comprehensive final examination or a master’s thesis is compensated for by an additional 3 credits of coursework, represented by STT 690 or STT 750 / MAT 750, whose objective is to apply knowledge of statistics to some real world problem.

Four Core Courses

All candidates for the degree program must complete the following set of four core courses (12 credits):

MAT 521 - Introduction to Probability 3 credit(s)
(students with a strong mathematics background are to take MAT 651).
MAT 525 - Mathematical Statistics 3 credit(s) (students with a strong mathematics background are to take MAT 652).

STT 750 - Statistical Consulting 3 credit(s) or

MAT 750 - Statistical Consulting 3 credit(s) For those students who do not include STT 750/MAT 750 in their programs of study, STT 690 should be taken and it should have a significant consulting component.

Any one of the following courses in regression Analysis:

- MAT 654 - Linear Models 3 credit(s)
- PSY 757 - Multiple Correlation and Regression 3 credit(s)
- MAS 766 - Linear Statistical Models I: Regression Models 3 credit(s)

APM 630

- SOC 714 - Intermediate Social Statistics 3 credit(s)
- ECN 621 - Econometrics I 3 credit(s)
- PPA 810

Four graduate courses (12 credits) are to be chosen from the following list:

Design of Experiments

- PSY 756 - Experimental Design and Statistical Methods II 3 credit(s)
- PSY 853 - Experimental Design and Statistical Tests 3 credit(s)
- MAS 767 - Linear Statistical Models II: Variance 3 credit(s)

APM 620

Sampling Theory

- MAS 765 - Sample Survey Methods and Theory 3 credit(s)

APM 625

Multivariate Methods

- PSY 857 - Multivariate Analysis 3 credit(s)
- PPA 810

- SOC 813 - Advanced Social Statistics 3 credit(s)
- PAI 721 - Introduction to Statistics 3 credit(s)
- PAI 722 - Quantitative Analysis 3 credit(s)
- PAI 730 - Problems in Public Administration 1-3 credit(s)
- PSC 794 - Advanced Quantitative Political Analysis 3 credit(s)
- MAT 755 - Multivariate Statistical Analysis 3 credit(s)

Nonparametric Methods

- MAS 723 - Nonparametric Statistics 3 credit(s)

Time Series Modeling and Analysis

- MAS 777 - Time Series Modeling and Analysis 3 credit(s)

Stochastic Processes/Markov Processes

- MAT 526 - Introduction to Stochastic Processes 3 credit(s)
- ECE 756 - Random Processes 0 credit(s)

Statistical Simulation and Nonstandard Data Analysis

- MAT 653 - Statistical Simulation and Nonstandard Data Analysis 3 credit(s)

Topics in Statistics

- MAT 850 - Topics in Statistics 3 credit(s)

Advanced Probability I and II

- MAT 721 - Probability I 3 credit(s)
- MAT 722 - Probability II 3 credit(s)

Statistical Ranking, Selection, and Multiple Comparisons

- MAT 752 - Statistical Ranking, Selection, and Multiple Comparisons 3 credit(s)

Spatial Statistics

- GEO 686 - Quantitative Geographic Analysis 3 credit(s)

Econometrics

- ECN 620 - Foundations of Econometrics 3 credit(s)
- ECN 622 - Econometrics II 3 credit(s)
- ECN 720 - Topics in Econometrics 3 credit(s)

Statistical Consulting

- STT 750 - Statistical Consulting 3 credit(s)
- MAT 750 - Statistical Consulting 3 credit(s)

The remaining 9 credits, selected in consultation with the student’s advisor, should:

emphasize statistical applications, or

involve consulting or advisement about statistical applications.

Degree:

Master of Science in Applied Statistics

Total Credits: 33

Art History, MA

Wayne Franits, Chair (Fall 2016)
Romita Ray, Chair (Spring 2017)
308 Bowne Hall
315-443-4835

Director of Graduate Studies:

Sascha Scott
308 Bowne Hall
315-443-5033

Director of Graduate Studies Florence

Sally Cornelison
308 Bowne Hall
315-443-9198

Faculty


M.A. in Art History, Main Campus Program

The M.A. in art history requires thirty graduate credits, taken over a period of two years, during which students plan individualized programs of study under the guidance of the faculty. Courses offered in art history cover a broad range of subject areas, providing opportunities for both breadth and specialization. At least one course in each of the five broad areas of art history taught in the department are required, including ancient/medieval, Renaissance, Baroque/18th century, modern/American, and non-Western. Also required are HQA 655-Proseminar in Graduate Research Methods and Scholarly Writing and HQA 656-The Literature of Art Criticism. Colloquia and special lectures augment formal courses. With permission, a limited number of credits (up to 6) may be taken outside the department, in such disciplines as literature, aesthetics, museum studies, and art librarianship, when relevant to a student’s program of study. Courses in studio art are not included in the degree program. Information on graduate programs in studio arts or museum studies can be obtained by writing to the assistant dean, College of Visual and Performing Arts. During the first semester of graduate study, students take an art history qualifying exam, which tests knowledge of major monuments and disciplinary vocabulary. The art history exam must be passed successfully before students enroll in their second semester of study. Students also take a language exam, which assesses reading knowledge of a second language, including Italian, French, German, or Spanish. The language exam must be passed by the beginning of their second year. In their last
semester, students participate in a seminar (HOA 757), during which they prepare a qualifying paper and present their findings at a public symposium. Faculty specializations in medieval, Italian and Northern Renaissance, baroque, and 18th-20th century art are reflected in library holdings that include several visual databases and a comprehensive collection of books and periodicals. The Syracuse University Art Galleries and the nearby Everson Museum of Art have notable collections of paintings, photographs, prints, ceramics, and sculpture.

Concurrent Degree with Museum Studies

Concurrent degrees are offered in art history within the College of Arts and Sciences and in museum studies through the College of Visual and Performing Arts. For these degrees, students complete a minimum of 51 credits, which must the requirements for the M.A. in art history (22 credits) and the M.A. in museum studies (27 credits).

For information on the M.A. in museum studies, contact Emily Stokes-Reed, Director of the Museum Studies Program, The Warehouse Suite 135, ewstokes@syr.edu.

M.A. in Art History, Florence Program in Renaissance Art

This specialized M.A. degree program devoted to the study of Italian Renaissance art requires thirty graduate credits, taken over three semesters. Successful applicants to this program typically have pursued undergraduate studies in cultural history with an emphasis on the visual arts and have a working knowledge of the Italian language. The four top-ranked candidates enter the program with Florence Fellowships that provide full tuition and a stipend; other funding opportunities are available. Students enrolled in this program must meet departmental art history and Italian language proficiency requirements during their first semester of study. Students begin their coursework in the fall semester at the University’s main campus in Syracuse. If necessary, at this time they enroll in Italian classes to reach fluency sufficient to conduct scholarly work in Italy. Upon successful completion of the first semester, students register for two semesters of coursework at Syracuse University in Florence. In addition to taking a variety of graduate seminars, during their year in Florence, students enroll in HOA 622, for which they undertake capstone research projects and present the results of their research at a public symposium.

The deadline for application to M.A. programs in art history is January 1.

Arts Leadership Administration, MA

Contact:

Mark Nerenhausen, Professor of Practice and Founding Director
manerenh@syr.edu
308 Bowne Hall
443-1796

The Janklow Arts Leadership Program is a comprehensive 15-month, 39-credit hour master’s program for recent college graduates and experienced practitioners. Candidates acquire core skills, as well as practical experience and understanding needed to become innovative leaders of for-profit or nonprofit arts organizations in the visual and performing arts. The program combines interdisciplinary coursework with professional mentorship, competitive internships and unique immersion opportunities. The curriculum encompasses coursework in entrepreneurship and leadership; marketing and public relations; financial accounting and budgetary planning; operations; strategic planning and analysis; financial and audience development; education and outreach; and legal, ethical, and public policy issues in the arts. Students gain strong management skills; local and global internship experiences; and positive leadership traits to make them successful visionaries and administrators.

Admission:

Applicants must have a B.A. or B.S. degree from a regionally accredited college or university, strong GRE test scores, and demonstrate knowledge of the arts or business management or both.

Limited financial support is available for qualified applicants.

Requirements:

15 month, 39 credit hours including 2 immersion courses; locations may include NYC and South Florida; capstone and internship.

Degree:

M.A. in Arts Leadership Administration Students must maintain a Graduate School required minimum GPA of 3.0.

Total Credits: 39

Biology, MS

Graduate Program Directors:

Jason Fridley, 315-443-3098
fridley@syr.edu
448 Life Sciences Complex

James Hewett, 315-443-9613
jhewett@syr.edu
350 Life Sciences Complex

Admissions

Successful applicants generally have a minimum undergraduate average of B and high scores on the verbal, quantitative and analytical writing tests of the Graduate Record Examinations (GRE).

Applicants must also have earned a B.S. or a B.A. degree and should have at least a minimal background in both physical and biological sciences, including the following: two years of biology, one year each of introductory chemistry, organic chemistry with laboratory, physics, and college level calculus. Although not required, a year of biochemistry is desirable for students interested in cell and molecular biology, and training in statistical analysis is desirable for all students.

Special consideration is given to students who
have conducted undergraduate research and whose recommendations attest to their skills in the laboratory or field and promise in research. Applicants whose scholarly interests are confluent with those of our Graduate Faculty will also receive priority consideration.

M.S. in Biology
The M.S. program requires at least 24 credits of formal coursework selected in consultation with the student’s Research Committee and six additional credits of thesis (BIO 997) are required. A thesis based on original research must be developed and successfully defended in accordance with the rules and regulations of the Graduate School. The maximum expected time in residence is three years.

Graduate Awards
The current minimum level of support for the 2016-2017 academic year is $26,602. with additional summer support available, currently at the level of $2,500. Given Syracuse’s low cost of living, this is a comfortable income. Virtually all department graduate students are supported financially throughout their graduate career. Support typically comes in the form of a teaching assistantship and tuition scholarship during the academic year, with students able to conduct their research full-time during the summer. Students may also be supported by their faculty research advisor's external grants or by Syracuse University Fellowships. Applying to local and national programs for graduate fellowships is strongly encouraged.

Research Facilities
Research facilities currently include AAALAC-accredited animal facilities, a research greenhouse, and local field experiment sites. Extensive facilities and instrumentation for carrying out modern biological research at the molecular, cellular, organismal, and population levels are available. Library holdings and computing facilities are readily accessible for student and faculty use. Our department is housed in the Life Sciences Complex, a 210,000-square-foot building with dedicated and outstanding research and teaching space for the life sciences.

Biomedical Forensic Sciences, MS
Forensic Science
forensics@syr.edu
(315) 443-0326

Faculty
Robert Silver, James T. Spencer, Michael B. Sponsler, Kevin Sweder

M.S. in Biomedical Forensic Sciences

The M.S. in Biomedical Forensic Sciences is intended for students aimed toward bioforensic careers and/or medical school. The degree program may serve as a post-baccalaureate program for pre-medical students who wish to enhance their academic credentials for admission to medical school. The degree is very well suited for careers in forensic pathology or forensic toxicology. The degree requires 36 credits, as outlined below.

Admission:
GRE or MCAT, three (3) letters of recommendation and official undergraduate transcripts

Required Coursework:
Gateway Courses - 15 credits required
- FSC 606 - Advanced Forensic Science 3 credit(s)
- FSC 631 - Statistics for Forensic Science 3 credit(s)
FSC 640 - Special Topics in Advanced Forensics 3 credit(s) or FSC 663 - Bloodstain Pattern Analysis 3 credit(s)
- FSC 651 - Forensic Pathology 3 credit(s)
FSC 653 - Forensic Toxicology 3 credit(s) or FSC 657 - Principles of Human Toxicology 3 credit(s)

Elective Courses - 21 credits required
At least one * course required
- ANT 633 - Human Osteology 3 credit(s)
- ANT 634 - Anthropology of Death 3 credit(s)
- ANT 635 - Bioarchaeology 3 credit(s)
- BIO 501 - Biology of Cancer 3 credit(s)
- BIO 503 - Developmental Biology 3 credit(s)
- BIO 565 - Cellular Physiology 3 credit(s)
- BIO 607 - Advanced Neuroscience 3 credit(s)
- BIO 662 - Molecular Genetics 3 credit(s)
BIO 663 - Molecular Biotechnology 4 credit(s) *
- BIO 665 - Molecular Biology Laboratory 3 credit(s) *
BIO 675 - Biochemistry Laboratory 4 credit(s) *
- CHE 575 - Organic Spectroscopy 3 credit(s)
- CHE 612 - Metals in Medicine 3 credit(s)
- CHE 614 - Introduction to Medicinal Chemistry 3 credit(s)
- CHE 627 - Organic Chemistry of Biological Molecules 3 credit(s)
- CHE 635 - Physical Cell Biology 3 credit(s)
CHE 677 - Proteins and Nucleic Acids Lab 3 credit(s) *
- CHE 678 - Perspectives in Biochemistry 3 credit(s)
- FSC 635 - Medicolegal Death Investigation I 3 credit(s)
- FSC 636 - Medicolegal Death Investigation II 3 credit(s)
- FSC 637 - Medicolegal Death Investigation for Emergency Responders 3 credit(s)
- FSC 640 - Special Topics in Advanced Forensics 3 credit(s)
- FSC 644 - Forensic Chemical Analysis 4 credit(s)
- FSC 652 - Forensic Mental Health 3 credit(s)
- FSC 653 - Forensic Toxicology 3 credit(s)
- FSC 654 - Nuclear Forensics 3 credit(s)
- FSC 657 - Principles of Human Toxicology 3 credit(s)
- FSC 661 - Firearms and Impression Evidence 3 credit(s)
- FSC 662 - Forensic Entomology 3 credit(s)
- FSC 663 - Bloodstain Pattern Analysis 3 credit(s)
- FSC 665 - Latent Prints 3 credit(s)
- FSC 667 - Forensic Photography 3 credit(s)
- FSC 668 - Crime Scene Investigation 3 credit(s)
- FSC 671 - Firearms and Impression Evidence II 3 credit(s)
- FSC 690 - Independent Study 1-6 credit(s)
IST 602 - Digital Forensics
- LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
- LIN 675 - Forensic Linguistics 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)

Total: 36 credits

Degree: Master of Science

Chemistry, MS

Chair:
Timothy M. Korter
1-014 Center for Science and Technology,
315-443-0269, tmkorter@syr.edu

Faculty
Mark S. Brainman, Carlos A. Castañeda, Joseph Chaiken, Arindam Chakraborty, John D. Chisholm, Robert P. Doyle, John M. Franck, James L. Hougland, Bruce S. Hudson, Tara Kahan, James Kallmerten, Ivan V. Korendoych, Timothy M. Korter,
Yan-Yeung Luk, Matthew M. Maye, Karin Ruhlandt, James T. Spencer, Michael B. Sponsler, Nancy I. Totah, Weiwei Zheng, Jon Zubieta

The Department of Chemistry is large enough to provide a broad range of graduate-level courses and research opportunities and yet small enough to foster close working relationships between students and professors. It includes 21 faculty, some 85 graduate students, 5 postdoctoral associates, and technical and secretarial staff. Programs of study include those for both M.S. and Ph.D. degrees, with research offerings in the areas of biochemistry, organic, inorganic, and physical chemistry, as well as those at the interface of these disciplines.

During the first year of graduate study, courses enable students to gain a sound theoretical foundation for their own research investigations. Students are encouraged to become actively involved in research projects as soon as possible.

M.S. in Chemistry

There are two options for M.S. students. A non-thesis option requires at least 30 credits in graduate chemistry and related courses, passing two of four qualifying breadth examinations, GPA of 3.0 prior to graduation and successful completion of a comprehensive examination or other culminating experience based on the coursework taken by the student. An M.S. degree based in part on a thesis requires a satisfactory master's thesis; at least 18 credits in graduate chemistry courses; a total of 30 graduate credits, including thesis credits; passing two of four qualifying breadth examinations; GPA of 3.0 prior to graduation and passing an oral examination based on the thesis.

Graduate Awards

The figures associated with various appointments are based on 2015 - 2016 awards.

Syracuse University Graduate Fellowships provide stipends of $24,310 (PhD) for nine months and tuition scholarships for a total of 30 credits for the academic year.

Graduate Teaching Assistantships, to support graduate study for students with superior qualifications, involve no more than 20 hours of teaching obligations per week during the academic year. They provide a stipend of $24,152 and a graduate tuition scholarship for 24 credits per year.

Summer Teaching Assistantships supporting undergraduate classes offered during the summer sessions, and Summer Research Fellowships—offered to graduate students making strong progress in their studies and research, provide stipends from $1,000 to $5,000.

Graduate Research Assistantships provide stipends over the academic year and summer from $19,000.

Facilities

The Center for Science and Technology near the main quadrangle of the Syracuse University campus provides space and facilities for chemistry faculty and graduate student research: glassblowing and electronic shops; millions of dollars of specialized equipment, including spectrometers, lasers, and other chemical instrumentation; computers and high-speed networks; and an automated X-ray diffractometer for structure determinations.

The Life Sciences Complex, located adjacent to the department of chemistry, provides research and teaching space for the departments of chemistry and biology, and helps foster interactions between the two departments. This building opened in fall 2008.

Computational Linguistics, MS

Computational Linguistics

Gerald Greenberg

ggreenbe@syr.edu

441 Hall of Languages

315-443-2875

Faculty

Howard A. Blair, Jaklin Kornfilt, Nancy McCracken, Maria Emma Ticio Quesada, Howard Turtle, Bei Yu

Computational Linguistics (also called Natural Language Processing, abbreviated as NLP) is a field of vital importance in the information age. With growing amounts of speech and text data, the demand keeps increasing for automated tools to understand human language and NLP specialists to develop and operate these tools.

In industry, Computational Linguistics techniques are being widely used in search engines, digital libraries, speech recognition systems, and data mining toolkits. The leading data analysis companies like SAS and SPSS all have added text analysis components to their products. Many open-source NLP toolkits have also been available. Companies with large amounts of text data need NLP specialists to develop in-house tools or use off-the-shelf tools to analyze their corpora.

Computational Linguistics also plays a critical role in the latest data-driven scholarship in computational social sciences and digital humanities. Humanist scholars and social scientists are increasingly using large corpora to make robust inferences in their research. Scientific literature, government documents, and user-generated content in social media are just a few examples of commonly used corpora. Students and scholars in sociology, journalism, and communication fields also need to learn to use NLP tools to slice and dice large document collections, identify the main themes and opinions of different parties.

Syracuse University is home to the Syracuse University Forensic and National Security Science Institute (FNSSI), which provides critical leadership for the protection of our nation in the areas of defense and security. The tools and techniques described above are also widely used in national defense and security agencies, as well as law enforcement agencies at the local, national, and international levels. The knowledge of such tools and their development and use is becoming more critical to employees in these fields, which is another reason SU is a strong candidate for a computational linguistics program.

Requirements:

In order to receive the Masters of Science in Computational Linguistics, students must complete at least 36-credit hours of coursework, which includes 3 or 6 credits in an internship, and earn a cumulative grade point average of at least 3.0.

Nine courses (five 3-credit LIN courses in linguistics, two 3 credit CPS courses in computational science, and two 3 credit IST courses in information studies) plus a 3 or 6 credit IST internship, all offered on a yearly basis, will be required of all those interested in receiving the degree. The first of these courses, LIN 601 - Introductory Linguistic Analysis, will provide essential grounding in the mechanics of language, e.g. the sound system, word structure, sentence structure, and meaning. Through the use of examples from a range of languages, students will learn about similarities and differences across languages, which will allow them to understand the various possible manifestations of natural language. LIN 641 - Syntactic Analysis, LIN 651 - Morphological Analysis, and LIN 611 - Semantics of Human Languages, build on the principles learned in LIN 601 to provide students with a deeper understanding of the three areas of linguistics that are most important to the field of computational linguistics. LIN 741 - Advanced Syntax, builds upon the principles of syntactic analysis which are introduced in LIN 641.

Two additional required courses are in information studies: The foundational courses IST 657 - Basics of Information Retrieval Systems and IST 664 - Natural Language Processing/CIS 668 - Natural Language Processing. A third required course is the internship course IST 971. This internship can be taken for three or six credits, if taken for three credits, an elective from the courses below for three credits needs to be added. IST 657 - Basics of Information Retrieval Systems, will provide fundamental knowledge in information representation, information seeking behavior, query and document matching, relevance measure, search interface design, and information retrieval system evaluation. IST 664 - Natural Language Processing, introduces concepts and methods in processing text at syntactic, semantic, and pragmatic levels. It covers techniques of tokenizing, sentence splitting, part-of-speech tagging, and parsing.

Two additional required courses are in computational science CPS 681 - Explorations in Computing and Programming and CPS 688 - Algorithms for Computational Journalism and Linguistics. Students who demonstrate sufficient knowledge in these areas may test out of the courses and replace them with elective courses.
Creative Writing, MFA

Contact:
Sarah Harwell, Associate Director, 420 Hall of Languages, scharwel@syr.edu, 315-443-9480
Christopher Kennedy, Director of Creative Writing, 416 Hall of Languages, c kennedy@syr.edu, 315-443-3755

Faculty
Michael Burkard, Jonathan Dee, Arthur Flowers, Brooks Haxton, Mary Karr, Christopher Kennedy, George Saunders, Bruce Smith, Dana Spiootta

The Syracuse program in creative writing has long been regarded as one of the best in the country. Each year six students are admitted in poetry and six in fiction to work closely in small workshops with an accomplished group of writers. Coursework includes a strong emphasis on the study of literature. Six semesters are usually needed to complete the M.F.A.

Submit online Graduate Application via CollegeNet by DECEMBER 15th.

FICTION APPLICANTS: UPLOAD your 20 page maximum writing sample with your EMBARK application by DECEMBER 15. In addition to uploading your fiction writing sample to your online application through CollegeNet, please mail in one hard copy as well by December 15 to: Sarah Harwell, Associate Director of Creative Writing, Department of English, Syracuse University, 401 Hall of Languages, Syracuse NY 13244-1170.

POETRY APPLICANTS: UPLOAD your 10-12 POEMS with CollegeNet application by December 15. Do NOT mail in your poetry writing sample.

Admission is based primarily on the writing sample, but also upon the academic record. Thus, letters of recommendation should address not only the student's creative work, but also his or her general preparedness for advanced graduate study. Likewise in their personal statements on the application for graduate study, students should state their reasons for pursuing an M.F.A. in creative writing as well as describe their own backgrounds as writers.

Requirements Candidates must complete 48 credits of coursework, which includes 9 credits of workshop, a minimum of 9 credits in forms courses, a 3-credit second-year essay seminar, 12 to 15 credits in other English department courses, 6 to 9 credits of electives outside the department, and 6 credits for the preparation of the thesis (a collection of poems or stories or a novel).

The Department of English offers a range of graduate programs: the M.A. in English, the M.F.A. in Creative Writing, and the Ph.D. in English. The department welcomes students who plan to become writers and scholar/teachers, and it makes a serious effort to tailor its programs to each student's interests. Classes are small, usually from 5 to 15 students, and there is ample opportunity for independent study and supervised research.

One of the department's greatest strengths is its faculty, which includes distinguished scholar-teachers and internationally known writers.

The graduate programs in English have in the recent past been reconfigured. Although students are asked to attain some coverage of literary periods, genres, and major authors, the department gives substantial attention to those modes of theoretical inquiry that have disrupted and enlivened the study of literature in recent years. Our current course offerings, therefore, represent both traditional approaches to English and important work in contemporary theory and cultural studies.

For more information about our graduate programs, visit our department web site at english.syr.edu.

Graduate Awards

Teaching assistantships, include tuition scholarships for nine credits per semester (plus six credits in the summer) as well as stipends from $14,826 to $15,789. New teaching assistants at the M.A. level are assigned to courses offered by the Writing Program. Teaching assistants have full responsibility for three sections a year, are expected to attend regular staff meetings and workshops, and participate in a coordinating group. There is also an ongoing mentorship and review of each teaching assistant's performance as a teacher. New teaching assistants take a teaching practicum (CCR 632 ) closely related to their classroom duties.

Beginning Ph.D. students serve as teaching assistants in undergraduate lecture courses taught by full-time faculty in the English Department for two to three years. They receive ongoing mentorship and faculty review of their performance.

Advanced Ph.D. students teach independent courses of their own design in the English department for one or two years, and participate in the Future Professoriate Project. This project offers mentored teaching and participation in teaching seminars every semester. Students who fulfill all the requirements receive at graduation a certificate in university teaching.

The department also competes for University Fellowships, awarded annually to outstanding applicants, and it offers six one-year creative writing fellowships. All fellowships include tuition scholarships for full-time study as well as stipends from $14,826 to $24,795.

M.F.A., M.A., and Ph.D. applicants should apply for financial aid as early as possible, preferably during the fall semester, but no later than January 9 for MA & PhD applicants and December 15 for MFA/CW applicants.

M.F.A. in Creative Writing

The Syracuse program in creative writing has long been regarded as one of the best in the country. Each year six students are admitted in poetry and six in fiction to work closely in small workshops.

Elective Courses.

The courses that follow are generally offered yearly. Students can select among them in completing the remaining credits required for completion of the degree, based on professional need and academic interest. Substitutions may be made with the permission of the director of the degree program.

- CIS 666 - Expert Systems 3 credit(s)
- CIS 683 - Expert Systems 3 credit(s)
- CIS 667 - Introduction to Artificial Intelligence 3 credit(s)
- CSE 684 - Introduction to Artificial Intelligence 3 credit(s)
- CIS 626 - Theoretical Foundations of Computer Science 3 credit(s)
- CIS 623 - Structured Programming and Formal Methods 3 credit(s)
- CSD 616 - Introduction to Applied Phonetics 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 612 - Pragmatics: Meaning and Context 3 credit(s)
- PHI 651 - Logic and Language 3 credit(s)
- IST 631 - Theory of Classification and Subject Representation 3 credit(s)
- IST 638 - Indexing and Abstracting Systems and Services 3 credit(s)
- IST 649 - Human Interaction with Computers 3 credit(s)
- IST 565 - Data Mining 3 credit(s)
- IST 736 - Text Mining 3 credit(s)

Admission requirements:

Completed Syracuse University Graduate School Application Resume Personal Statement - include background and interest in the program Official transcripts - from graduate and undergraduate studies 3 Letters of Recommendation Application Fee GRE Scores: Required TOEFL Scores: 580 (written test), 237 (computer-based test), 92-93 (internet-based test) minimum for unconditional admissions

Additional Information

Partial tuition scholarships may be available. Please contact the Director for further information.

College of Arts and Sciences
with an accomplished group of writers. Coursework includes a strong emphasis on the study of literature. Six semesters are usually needed to complete the M.F.A.

Applicants must upload a sample of fiction or poetry to their online application through CollegeNet no later than December 15, as well as complete the online graduate application for graduate study. Admission is based primarily on this sample, but also upon the academic record. Thus, letters of recommendation should address not only the student’s creative work, but also his or her general preparedness for advanced graduate study. Likewise in their personal statements on the application for graduate study, students should state their reasons for pursuing an M.F.A. in creative writing as well as describe their own backgrounds as writers. The writing sample (consisting of either a set of 10-12 poems or 20 pages, maximum, for fiction writing) Fiction applicants are to also, in addition to uploading their writing sample, send one hard copy to Sarah Harwell, Associate Director of Creative Writing, Department of English, 401 Hall of Languages, Syracuse University, Syracuse NY 13244-1170.

Earth Sciences, MA
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. Ivy, 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

Graduate study in the Department of Earth Sciences offers students opportunities for field-based geological and geophysical research worldwide. Ongoing research in the Department is focused primarily in the areas of environmental geology/global change and tectonics/crustal evolution—two of the most rapidly developing areas of the earth sciences. The Department is housed in the William B. Heroy Geology Laboratory, which contains state-of-the-art analytical and computing facilities, modern well-equipped teaching spaces, and a dedicated Earth Sciences library. All of the faculty are engaged in research and teaching.

The Department typically has a combination of students pursuing either the M.S. or Ph.D. degree. Several of our faculty-led research projects are large collaborative, multi-institutional, multi-national programs that afford our graduate students opportunities to work in diverse parts of the world with teams of internationally recognized scholars. Department faculty and graduate students are currently pursuing field studies worldwide.

Admission
Incoming students are expected to have two semesters of the following courses: calculus, chemistry, and physics or biology. In addition, incoming students need at least three distribution courses in the Earth Sciences, such as: paleobiology, sedimentology, mineralogy, structural geology, tectonics, geochemistry, geophysics, climatology, paleoceanography, paleoclimatology, marine geology, and/or hydrogeology. Students are strongly encouraged to have participated in an approved summer field course or comparable field experience. Substitutions may be granted upon petition of the Department.

Degree Programs
The Department offers programs of graduate study leading to the M.A., M.S., and Ph.D. Minimum requirements for each degree are an average GPA of 3.0 in major subjects and an overall average of 2.8.

Students who wish to continue graduate study toward a Ph.D. in Earth Sciences following a master’s degree must submit a Syracuse University Graduate School application form, including letters of reference, to the Department.

M.A. in Earth Sciences
Thirty credits are required. At least 15 of these must be at or above the 600 level. The student is required to pass a comprehensive written examination, but no thesis is required.

Graduate Awards
Graduate students are expected to pursue their studies energetically and to complete their advanced degree work without undue delay. Financial support typically will be given to a student for four semesters at the master’s level or eight semesters in the Ph.D. program.

Graduate Scholarships Awarded to students with superior qualifications, provide, in most cases, full tuition for academic year.

Graduate Teaching Assistantships:
Offered to some Graduate Scholarship recipients; no more than an average of 20 hours of work per week; 8.5 months; stipend in addition to tuition scholarship for up to 24 credits per year as needed.

Graduate Research Assistantships:
Offered to some Graduate Scholarship recipients; no more than an average of 20 hours of work per week; 8.5 to 12 months; stipends variable in addition to tuition scholarship for up to 24 credits per year as needed.

Syracuse University Graduate Fellowships:
Stipend for 8.5 months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 for the academic year.

Department Research Support:
The Department has various funds available to support graduate student travel and research.

Facilities
The Heroy Geology Laboratory provides well-equipped laboratories and student study research offices. The Department houses state-of-the-art workstation-based seismic data processing, GIS, and image-processing facilities; first-class laboratories for U/Pb geochronology, 40Ar/39Ar thermochronology, light stable isotope geochemistry, (U-Th)/He dating, and fission track thermochronology. The Department also has a range of sample preparation facilities, clean labs, two electron microscopes for imaging and elemental analysis, a direct current plasmaspectrometer, ion-chromatograph and an array of field geophysical gear. A 16-unit Windows- and Macintosh-based computer cluster is available to all Department members. The Department also houses a dedicated 28,844 volume research library.

The University’s location is central to diverse geologic terrain including the classic Paleozoic sedimentary rocks of the Appalachian plateau, the complex structures and metamorphic rocks of the Adirondack Mountains, the Canadian Shield, and Quaternary sequences in the Finger Lakes. The scope of departmental research is international.

Earth Sciences, MS
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. Ivy, 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 Department typically has a combination of students pursuing either the M.S. or Ph.D. degree. Several of our faculty-led research projects are...
large collaborative, multi-institutional, multi-national programs that afford our graduate students opportunities to work in diverse parts of the world with teams of internationally recognized scholars. Department faculty and graduate students are currently pursuing field studies world wide.

Admission

Incoming students are expected to have two semesters of the following courses: calculus, chemistry, and physics or biology. In addition, incoming students need at least three distribution courses in the Earth Sciences, such as: paleobiology, sedimentology, mineralogy, structural geology, tectonics, geochemistry, geophysics, climatology, paleoceanography, paleoclimatology, marine geology, and/or hydrogeology. Students are strongly encouraged to have participated in an approved summer field course or comparable field experience. Substitutions may be granted upon petition of the Department.

Degree Programs

The Department offers programs of graduate study leading to the M.A., M.S., and Ph.D. Minimum requirements for each degree are an average GPA of 3.0 in major subjects and an overall average of 2.8.

Students who wish to continue graduate study toward a Ph.D. in Earth Sciences following a master's degree must submit a Syracuse University Graduate School application form, including letters of reference, to the Department.

M.S. in Earth Sciences

Thirty credits are required. Six of these are in thesis credit and 24 credits are for graduate course work. M.S. candidates must pass an oral defense of their thesis.

Graduate Awards

Graduate students are expected to pursue their studies energetically and to complete their advanced degree work without undue delay. Financial support typically will be given to a student for four semesters at the master's level or eight semesters in the Ph.D. program.

Graduate Scholarships Awarded to students with superior qualifications, provide, in most cases, full tuition for academic year.

Graduate Teaching Assistantships:

Offered to some Graduate Scholarship recipients; no more than an average of 20 hours of work per week; 8.5 to 12 months; stipend in addition to tuition scholarship for up to 24 credits per year as needed.

Graduate Research

Assistantships:

Offered to some Graduate Scholarship recipients; no more than an average of 20 hours per week; 8.5 to 12 months; stipend in addition to tuition scholarship for up to 24 credits per year as needed.

Syracuse University Graduate Fellowships:

Stipend for 8.5 months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 for the academic year.

Department Research Support:

The Department has various funds available to support graduate student travel and research.

Facilities

The Heroy Geology Laboratory provides well-equipped laboratories and student study research offices. The Department houses state-of-the-art workstation-based seismic data processing, GIS, and image-processing facilities; first-class laboratories for U/Pb geochronology, 40Ar/39Ar thermochronology, light stable isotope geochemistry, (U-Th)/He dating, and fission track thermochronology. The Department also has a range of sample preparation facilities, clean labs, two electron microscopes for imaging and elemental analysis, a direct current plasmaspectrometer, ion-chromatograph and an array of field geophysical gear. A 16-unit Windows- and Macintosh-based computer cluster is available to all Department members. The Department also houses a dedicated 28,844 volume research library.

The University's location is central to diverse geologic terrain including the classic Paleozoic sedimentary rocks of the Appalachian plateau, the complex structures and metamorphic rocks of the Adirondack Mountains, the Canadian Shield, and Quaternary sequences in the Finger Lakes. The scope of departmental research is international.

English, MA

Contact:

Dorri Beam, Director of Graduate Studies, 401 Hall of Languages, 315-443-2174;

Faculty

Crystal Bartolovich, Dorri Beam, Michael Burkard, Dympna Callaghan, Manan Desai, Susan Edmunds, Carol Fadda-Conrey, Arthur Flowers, Chris Forster, Ken Frieden, Mike Goode, Roger Hallas, Chris Hanson, Brooks Haxton, Mary Karr, Christopher Kennedy, Claudia Klawer, Erin S. Mackie, Kevin Morrison, Donald E. Morton, Patricia Roylance, George Saunders, Stephanie Shirilin, Bruce Smith, Dana Spiotta, Harvey Teres, Silvio Torres-Saillant, Meina Yates-Richard, Christopher Eng

The Department of English offers a range of graduate programs: the M.A. in English, the M.F.A. in Creative Writing, and the Ph.D. in English.

The department welcomes students who plan to become writers and scholar/teachers, and it makes a serious effort to tailor its programs to each student's interests. Classes are small, usually from 5 to 15 students, and there is ample opportunity for independent study and supervised research.

One of the department's greatest strengths is its faculty, which includes distinguished scholar-teachers and internationally known writers.

The graduate programs in English ask students to attain some coverage of literary periods, genres, and major authors, while also devoting substantial attention to those modes of theoretical inquiry that have disrupted and enlivened the study of literature in recent years. To that end our current course offerings represent both traditional approaches to English and important work in contemporary theory and cultural studies.

For more information about our graduate programs, degree and program requirements, course offerings, and specific application deadline dates, visit our department web site at http://english.syr.edu/

M.A. in English

This master's degree is seen as a step toward the doctorate: therefore the department welcomes applicants who wish to go on to the Ph.D. Applicants should have a strong undergraduate background, if not a major, in English. In their intellectual statements on the application for graduate study, students should define their intellectual projects and state their reasons for pursuing an advanced degree.

The department has particular strengths in early modern literature, 18th and 19th-century British studies, American studies, and film, but includes other areas as well. The faculty all share a strong interest in literary history and forms, critical theory, and cultural studies. Four semesters are usually required to complete the M.A. Approximately four students are admitted each year.

Courses:

The minimum requirement for the degree is 30 credits of coursework in English (ENG 630/ENG 730) and successful completion of the dossier. ENG 631 is a required part of the 30 credits. The 30 credits of coursework required for the degree must be taken in English at the 630 and 730 level and must include three 730-level courses. Students may take additional courses in English or in other departments above and beyond the minimum credits required for the degree.

Graduate Awards

Teaching assistantships, include tuition scholarships for nine credits per semester (plus
six credits in the summer) as well as stipends from $14,826 to $15,789. New teaching assistants at the M.A. level are assigned to courses offered by the Writing Program. Teaching assistants have full responsibility for three sections a year, are expected to attend regular staff meetings and workshops, and participate in a coordinating group. There is also an ongoing mentorship and review of each teaching assistant's performance as a teacher. New teaching assistants take a teaching practicum (CCR 632) closely related to their classroom duties.

Beginning Ph.D. students serve as teaching assistants in undergraduate lecture courses taught by full-time faculty in the English Department for two to three years. They receive ongoing mentorship and faculty review of their performance.

Advanced Ph.D. students teach independent courses of their own design in the English department for one or two years, and participate in the Future Professorate Project. This project offers mentored teaching and participation in teaching seminars every semester. Students who fulfill all the requirements receive at graduation a certificate in university teaching.

One Ph.D. University Fellowship is awarded to a new applicant of exceptional quality and determined by the Graduate committee and the department also competes for other various fellowships such as African America Fellowships, Ronald E. McNair Fellowships. All fellowships include tuition scholarships for full-time study as well as stipends from $14,826 to $24,795.

**Forensic Science, MS**

**Forensic Science**  
forensics@syr.edu  
(315) 443-0326

**Faculty**

Robert Silver, James T. Spencer, Michael B. Sponsler, Kevin Sweder

The Masters of Science in Forensic Science is a 36 credit hour program of study designed to offer students both a global perspective and an opportunity for in-depth study at the graduate level in forensic science. The degree provides students with a fundamental understanding of the concepts and principles involved in 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 on these fields and it is only through an understanding of these critical scientific concepts that those in the legal system may be effective in criminal investigations and judicial proceedings. A graduate M.S. degree in Forensic Science offers a strong complement for people interested in a focus on criminal justice as related to major areas of study such as anthropology, biology, chemistry, physics, geology, psychology, engineering, journalism, education, medicine, and law.

Students can choose to enroll in the advanced, general or nuclear forensics track.

### Program Requirements

#### Advanced Track

**I. Gateway Courses - 16 Credits Required**

- FSC 606 - Advanced Forensic Science 3 credit(s)
- FSC 631 - Statistics for Forensic Science 3 credit(s)
- FSC 632 - Research and Career Resources 3 credit(s)
- FSC 633 - Quality Assurance and Ethics 3 credit(s)
- FSC 644 - Forensic Chemical Analysis 4 credit(s)

**II. Electives - 17 Credits Required**

At least 9 elective credits must be a part of a designated concentration. Student-specific concentrations, potentially including FSC 690, may be allowed by petition.

**Antropology Concentration**

- CHE 690 - Forensic Anthropology 3 credit(s)
- CHE 677 - Proteins and Nucleic Acids Lab 3 credit(s)
- FSC 657 - Principles of Human Toxicology 3 credit(s)

**Impressions Evidence Concentration**

- FSC 661 - Firearms and Impression Evidence 3 credit(s)
- FSC 665 - Latent Prints 3 credit(s)
- FSC 671 - Firearms and Impressions Evidence II 3 credit(s)

**Jurisprudence Concentration**

- LAW 604 - Criminal Law 3 credit(s)
- LAW 708 - Constitutional Criminal Procedure - Investigative 3 credit(s)
- LAW 718 - Evidence 4 credit(s)
- LAW 719 - Law and Psychology 3 credit(s)
- LAW 759 - Computer Crimes 3 credit(s)
- LAW 781 - Forensic Evidence

**Linguistics Concentration**

- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
- LIN 675 - Forensic Linguistics 3 credit(s)

**Medicolegal Death Investigation Concentration**

- FSC 635 - Medicolegal Death Investigation I 3 credit(s)
- FSC 636 - Medicolegal Death Investigation II 3 credit(s)
- FSC 651 - Forensic Pathology 3 credit(s)

**National Security Science Concentration**

- FSC 655 - Nuclear Forensics 3 credit(s)
- FSC 640 - Special Topics in Advanced Forensics 3 credit(s)
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)

**Psychiatry & Behavioral Science Concentration**

- FSC 652 - Forensic Mental Health 3 credit(s)
- PSY 674 - Advanced Social Psychology 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)
Regulatory Science Concentration
FSC 656 - Regulation and Compliance
- FSC 657 - Principles of Human Toxicology 3 credit(s)
- FSC 653 - Forensic Toxicology 3 credit(s)

Toxicology Concentration
- FSC 651 - Forensic Pathology 3 credit(s)
- FSC 653 - Forensic Toxicology 3 credit(s)
- FSC 657 - Principles of Human Toxicology 3 credit(s)

Full Electives List

I. Gateway Courses - 12 Credits Required
- FSC 671 - Firearms and Impressions Evidence II 3 credit(s)
- FSC 690 - Independent Study 1-6 credit(s)
- IST 602 - Digital Forensics
- LAW 604 - Criminal Law 3 credit(s)
- LAW 708 - Constitutional Criminal Procedure - Investigative 3 credit(s)
- LAW 718 - Evidence 4 credit(s)
- LAW 719 - Law and Psychology 3 credit(s)
- LAW 759 - Computer Crimes 3 credit(s)
- LAW 781 - Forensic Evidence
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
- LIN 675 - Forensic Linguistics 3 credit(s)
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)
- PSY 674 - Advanced Social Psychology 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)

II. Electives - 21 Credits Required
At least 9 elective credits must be a part of a designated concentration. Student-specific concentrations, potentially including FSC 690, may be allowed by petition.
LAW 781 - Forensic Evidence

Linguistics Concentration

- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
- LIN 675 - Forensic Linguistics 3 credit(s)

Medicolegal Death Investigation Concentration

- FSC 635 - Medicolegal Death Investigation I 3 credit(s)
- FSC 636 - Medicolegal Death Investigation II 3 credit(s)
- FSC 651 - Forensic Pathology 3 credit(s)

National Security Science Concentration

- FSC 654 - Nuclear Forensics 3 credit(s)
- FSC 640 - Special Topics in Advanced Forensics 3 credit(s) Countering WMDs
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)

Psychiatry & Behavioral Science Concentration

- FSC 652 - Forensic Mental Health 3 credit(s)
- PSY 674 - Advanced Social Psychology 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)

Regulatory Science Concentration

- FSC 656 - Regulation and Compliance
- FSC 657 - Principles of Human Toxicology 3 credit(s)
- FSC 653 - Forensic Toxicology 3 credit(s)

Toxicology Concentration

- FSC 651 - Forensic Pathology 3 credit(s)
- FSC 653 - Forensic Toxicology 3 credit(s)
- FSC 657 - Principles of Human Toxicology 3 credit(s)

Full Electives List

- ANT 600 - Selected Topics 1-6 credit(s) Reading the Body
- ANT 633 - Human Osteology 3 credit(s)
- ANT 634 - Anthropology of Death 3 credit(s)
- ANT 636 - Bioarchaeology 3 credit(s)
- BIO 662 - Molecular Genetics 3 credit(s)
- BIO 663 - Molecular Biotechnology 4 credit(s)
- BIO 665 - Molecular Biology Laboratory 3 credit(s)
- BIO 675 - Biochemistry Laboratory 4 credit(s)
- CHE 575 - Organic Spectroscopy 3 credit(s)
- CHE 677 - Proteins and Nucleic Acids Lab 3 credit(s)
- BCM 677 - Proteins and Nucleic Acids Lab 3 credit(s)
- FSC 635 - Medicolegal Death Investigation I 3 credit(s)
- FSC 636 - Medicolegal Death Investigation II 3 credit(s)
- FSC 637 - Medicolegal Death Investigation for Emergency Responders 3 credit(s)
- FSC 640 - Special Topics in Advanced Forensics 3 credit(s)
- FSC 651 - Forensic Pathology 3 credit(s)
- FSC 652 - Forensic Mental Health 3 credit(s)
- FSC 653 - Forensic Toxicology 3 credit(s)
- FSC 654 - Nuclear Forensics 3 credit(s)
- FSC 657 - Principles of Human Toxicology 3 credit(s)
- FSC 661 - Firearms and Impression Evidence 3 credit(s)
- FSC 662 - Forensic Entomology 3 credit(s)
- FSC 663 - Bloodstain Pattern Analysis 3 credit(s)
- FSC 664 - Forensic Biochemical Analysis
- FSC 665 - Latent Prints 3 credit(s)
- FSC 667 - Forensic Photography 3 credit(s)
- FSC 668 - Crime Scene Investigation 3 credit(s)
- FSC 671 - Firearms and Impressions Evidence II 3 credit(s)
- FSC 690 - Independent Study 1-6 credit(s)
- IST 602 - Digital Forensics
- LAW 604 - Criminal Law 3 credit(s)
- LAW 708 - Constitutional Criminal Procedure - Investigative 3 credit(s)
- LAW 718 - Evidence 4 credit(s)
- LAW 719 - Law and Psychology 3 credit(s)
- LAW 759 - Computer Crimes 3 credit(s)
- LAW 781 - Forensic Evidence
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
- LIN 675 - Forensic Linguistics 3 credit(s)
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)
- PSY 674 - Advanced Social Psychology 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)
- WGS 626 - Persons in Social Context 3 credit(s)

III. Internship or Independent Study Research - at least 3 credits required
(additional credits may be used to satisfy elective requirements).
- FSC 690 - Independent Study 1-6 credit(s)

Nuclear Forensics Track

I. Gateway Courses - 22 Credits Required

- FSC 606 - Advanced Forensic Science 3 credit(s)
- FSC 631 - Statistics for Forensic Science 3 credit(s)
- FSC 632 - Research and Career Resources 3 credit(s)
- FSC 633 - Quality Assurance and Ethics 3 credit(s)
- FSC 644 - Forensic Chemical Analysis 4 credit(s)
- FSC 654 - Nuclear Forensics 3 credit(s)
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)

II. Elective Courses - 5 credits required

ANT 600 - Selected Topics 1-6 credit(s) Reading the Body
- ANT 633 - Human Osteology 3 credit(s)
- ANT 634 - Anthropology of Death 3 credit(s)
- ANT 636 - Bioarchaeology 3 credit(s)
- BIO 662 - Molecular Genetics 3 credit(s)
- BIO 663 - Molecular Biotechnology 4 credit(s)
- BIO 665 - Molecular Biology Laboratory 3 credit(s)
- BIO 675 - Biochemistry Laboratory 4 credit(s)
- CHE 575 - Organic Spectroscopy 3 credit(s)
- CHE 677 - Proteins and Nucleic Acids Lab 3 credit(s)
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)
- PSY 674 - Advanced Social Psychology 3 credit(s)
College of Arts and Sciences

FSC 651 - Forensic Pathology 3 credit(s)
FSC 652 - Forensic Mental Health 3 credit(s)
FSC 653 - Forensic Toxicology 3 credit(s)
FSC 654 - Nuclear Forensics 3 credit(s)
FSC 657 - Principles of Human Toxicology 3 credit(s)
FSC 661 - Firearms and Impression Evidence 3 credit(s)
FSC 662 - Forensic Entomology 3 credit(s)
FSC 663 - Bloodstain Pattern Analysis 3 credit(s)
FSC 664 - Forensic Biochemical Analysis
FSC 665 - Latent Prints 3 credit(s)
FSC 667 - Forensic Photography 3 credit(s)
FSC 668 - Crime Scene Investigation 3 credit(s)
FSC 670 - Independent Study 1-6 credit(s)
FSC 671 - Firearms and Impressions Evidence II 3 credit(s)
FSC 690 - Independent Study 1-6 credit(s)
IST 602 - Digital Forensics
LAW 604 - Criminal Law 3 credit(s)
LAW 708 - Constitutional Criminal Procedure - Investigative 3 credit(s)
LAW 718 - Evidence 4 credit(s)
LAW 719 - Law and Psychology 3 credit(s)
LAW 759 - Computer Crimes 3 credit(s)
LAW 781 - Forensic Evidence
LIN 601 - Introductory Linguistic Analysis 3 credit(s)
LIN 631 - Phonological Analysis 3 credit(s)
LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
LIN 675 - Forensic Linguistics 3 credit(s)
NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)
PSY 674 - Advanced Social Psychology 3 credit(s)
SWK 724 - Psychopathology 3 credit(s)
SWK 626 - Persons in Social Context 3 credit(s)

III. Internship with Research - 9 credits at Brookhaven National Lab. required

Each student is required to participate in original research, write a detailed report of publishable quality, and successfully defend the results in front of a committee of three faculty members in a public seminar. This research will be conducted as part of the Brookhaven internship. Additional credits of independent study or internship may be used to satisfy elective credit by petition.

• FSC 690 - Independent Study 1-6 credit(s)

Comments
Law courses are open to MS in forensic science students by consent of the instructor. Although these courses are usually held once a year (Evidence is offered every semester), the law college cannot guarantee that these courses will be offered every year, but instead offered irregularly on a demand basis within the law school. MS students should also be aware that the law school's calendar is somewhat different from the rest of the campus and students enrolled in LAW courses will be expected to take exams and complete work based upon the law college's academic schedule (although the Law College exempts non-law students from the application of their grading curves).

French and Francophone Studies, MA

Contact:
Hope Glidden
Languages, Literatures, and Linguistics
340 H.B. Crouse
315-443-2175.

Faculty
Hope Glidden, Jean Jonassaint, Amy S. Wyngaard

Major Requirements
To earn the M.A. in French and Francophone studies, a student is required to complete a minimum of 30 credits of coursework. As a final exercise M.A. candidates must choose one of the following options:
An oral defense of a dossier of three term papers (one hour) or
A written examination (two sessions of three hours each)
If they choose option 1, they will be required to present and defend a dossier consisting of three term papers, revised by the student and approved by each faculty member for whom they were originally written.
The examination is normally administered during the first two weeks of December or the last two weeks of April. All students are required to take the examination no later than one semester after they have completed 30 credits of coursework. All students planning to take the oral examination must consult with their graduate advisor concerning the date of their examination.

Linguistic Studies, MA

Director
Gerald Greenberg
ggreenbe@syr.edu

441 Hall of Languages
315-443-2875

Faculty

This program provides the student with intensive and advanced education in linguistics and language-related study. The student works with the concentration advisor in one of six concentration areas:
Information Representation and Retrieval;
Language Acquisition;
Language, Culture, and Society;
Linguistic Theory;
Logic and Language; and
Teaching languages (English Language Teaching/Foreign Language Teaching)

Program Requirements
The M.A. degree requires 30 credits of graduate coursework. 12 credits come from the following Core courses: LIN 601 - Introductory Linguistic Analysis, LIN 631 - Phonological Analysis, LIN 641 - Syntactic Analysis, LIN 571 - Topics in Sociolinguistics. The remaining 18 credits come from one of the six concentration areas with the approval of the advisor for that concentration area. All four Core courses and all required courses within a student's concentration area must be completed with a grade of B or better; all other courses must be completed with a grade of B- or better. A thesis may be substituted for 6 credits of course work subject to the approval of the concentration advisor. All students must successfully complete three comprehensive examinations; one in Syntax, one in Phonology, and one in Sociolinguistics. All students must also either successfully complete a comprehensive examination in their concentration area, or successfully write and defend a thesis in their concentration area.
The student works with the concentration advisor in one of six concentration areas:

1. Information Representation and Retrieval:
Concentration Advisor
Bei Yu
Assistant Professor
Office: 320 Hinds Hall
Tel: 315-443-3614
Email: byu@syr.edu

Equivalent or alternative courses may be substituted for any of the courses listed below by approval of the program. Be aware that certain courses may have prerequisites, e.g., LIN 641
- Syntactic Analysis must be taken before LIN 741 - Advanced Syntax, LIN 601 - Introductory Linguistic Analysis must be taken before LIN 631 - Phonological Analysis or LIN 641 - Syntactic Analysis, and CSD 616 - Introduction to Applied Phonetics must be taken before CSD 638 - Clinical Phonology or CSD 643 (Phonological Disability).

Linguistics Core Courses (12 credits)
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 641 - Syntactic Analysis 3 credit(s)
- LIN 571 - Topics in Sociolinguistics 3 credit(s)

Concentration Area Elective Courses (12 Credits)
Select four courses from the list below in consultation with your advisor.
- CIS 563 - Natural Language Processing or CSD 623 - Language Disorders of Early Childhood 3 credit(s)
- IST 664 - Natural Language Processing 3 credit(s)
- IST 637 - Digital Information Retrieval Services 3 credit(s)

Concentration Area Elective Courses (6 Credits)
- CIS 563 - Natural Language Processing or CSD 623 - Language Disorders of Early Childhood 3 credit(s)
- IST 664 - Natural Language Processing 3 credit(s)
- IST 637 - Digital Information Retrieval Services 3 credit(s)

Concentration Area Elective Courses (12 Credits)
Select two courses from the list in consultation with your concentration advisor.
- ANT 678 - Language and Gender 3 credit(s)
- ANT 661 - Introduction to Historical Linguistics 3 credit(s)
- LIN 691 - Universal Grammar and Multiculturalism 3 credit(s)
- LIN 741 - Advanced Syntax 3 credit(s)
- PSY 734 - Developmental Psychology: Infancy and Childhood 3 credit(s)
- LIN 622 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
- LIN 673 - Language Variation and Change 3 credit(s)

Concentration Area Elective Courses (12 Credits)
Required:
- CSD 622 - Development of Speech and Language 3 credit(s)

Choose 3 of the Following:
- LIN 591 - Second Language Acquisition 3 credit(s)
- CSD 616 - Introduction to Applied Phonetics 3 credit(s)
- CSD 627 - Speech and Language Disorders in Children 3 credit(s)
- CSD 723 - Assessment of Children’s Language 3 credit(s)
- CSD 623 - Language Disorders of Early Childhood 3 credit(s)
- CSD 731 - Language Disorders in School-Age Children 3 credit(s)
- CSD 638 - Clinical Phonology 3 credit(s)

LIN 571 - Topics in Sociolinguistics 3 credit(s)

2. Language Acquisition:
Concentration Advisor
Linda Milosky
Associate Professor
Office: 621 Skytop Suite 1200
Tel: 315-443-9620
Email: milosky@sy.edu

Equivalent or alternative courses may be substituted for any of the courses listed below by approval of the program. Be aware that certain courses may have prerequisites, e.g., LIN 641 - Syntactic Analysis must be taken before LIN 741 - Advanced Syntax, LIN 601 - Introductory Linguistic Analysis must be taken before LIN 631 - Phonological Analysis or LIN 641 - Syntactic Analysis, and CSD 616 - Introduction to Applied Phonetics must be taken before CSD 638 - Clinical Phonology or CSD 643 (Phonological Disability).

Linguistics Core Courses (12 Credits)
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 641 - Syntactic Analysis 3 credit(s)
- PHI 651 - Logic and Language 3 credit(s)

3. Language, Culture, and Society:
Concentration Advisor
Susan Wadley
Professor
Office: 209 Maxwell Hall
Tel: 315-443-1011
Email: swadley@syr.edu

Equivalent or alternative courses may be substituted for any of the courses listed below by approval of the program. Be aware that certain courses may have prerequisites, e.g., LIN 641 - Syntactic Analysis must be taken before LIN 741 - Advanced Syntax, LIN 601 - Introductory Linguistic Analysis must be taken before LIN 631 - Phonological Analysis or LIN 641 - Syntactic Analysis, and CSD 616 - Introduction to Applied Phonetics must be taken before CSD 638 - Clinical Phonology or CSD 643 (Phonological Disability).

Linguistics Core Courses (12 Credits)
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 641 - Syntactic Analysis 3 credit(s)
- LIN 571 - Topics in Sociolinguistics 3 credit(s)

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• ANT 672 - Language, Culture, and Society 3 credit(s)

**Concentration Area Elective Courses (9 Credits)**
Select 3 courses from the list in consultation with the concentration advisor.

ANT 678 - Language and Gender
• ANT 682 - Life Histories/Narratives 3 credit(s)
• LIN 661 - Introduction to Historical Linguistics 3 credit(s)
• LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
• LIN 681 - Global Communication Through World Englishes 3 credit(s)
• LIN 691 - Universal Grammar and Second Language Acquisition 3 credit(s)
• CRS 535 - Communication & Community 3 credit(s)
• CRS 614 - Communication, Power & Gender 3 credit(s)
• CRS 630 - Intercultural Communication 3 credit(s)
• CRS 514 - Language & Meaning 3 credit(s)

“Structure of Modern Language or History of Language” Course
An advanced “Structure of Modern Language or History of Language” course, or an area studies course, may be taken with approval of the concentration advisor and the Program.

• LIN 621 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
• LIN 622 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
• LIN 626 - Structure of Standard Arabic 3 credit(s)
• LIN 673 - Language Variation and Change 3 credit(s)
• SPA 636 - The Structure of Spanish 3 credit(s)

4. Linguistic Theory:
Concentration Advisor
Jaklin Kornfilt
Professor
Office: 305 HBC
Tel: 315-443-5375
Email: kornfilt@syr.edu

Equivalent or alternative courses may be substituted for any of the courses listed below by approval of the program. Be aware that certain courses may have prerequisites, e.g., LIN 641 - Syntactic Analysis must be taken before LIN 741 - Advanced Syntax, LIN 601 - Introductory Linguistic Analysis must be taken before LIN 631 - Phonological Analysis or LIN 641 - Syntactic Analysis, and CSD 616 - Introduction to Applied Phonetics must be taken before CSD 638 - Introduction to Applied Phonetics must be taken before CSD 638 -

Analysis, and CSD 616 - Introduction to Applied Phonetics must be taken before CSD 638 - Clinical Phonology or CSD 643 (Phonological Disability).

**Linguistics Core Courses (12 Credits)**
• LIN 601 - Introductory Linguistic Analysis 3 credit(s)
• LIN 631 - Phonological Analysis 3 credit(s)
• LIN 641 - Syntactic Analysis 3 credit(s)
• LIN 571 - Topics in Sociolinguistics 3 credit(s)

**Concentration Area Required Courses (6 Credits)**
Select 2 courses from the list below in consultation with your advisor.

• LIN 611 - Semantics of Human Languages 3 credit(s)
• LIN 612 - Pragmatics: Meaning and Context 3 credit(s)
• LIN 651 - Morphological Analysis 3 credit(s)
• LIN 661 - Introduction to Historical Linguistics 3 credit(s)

LIN 741 - Advanced Syntax 3 credit(s) *

Note:
*Given that LIN 741 is offered in the Fall, LIN 641 - Syntactic Analysis must be taken in the Spring semester.

*LIN 741 is a required course in this concentration (unless it is not offered in the student’s second year).

**Concentration Area Elective Courses (9 Credits)**
Select three appropriate courses from the list below in consultation with your concentration advisor.

ANT 671 - Language, Culture, and Society
• CIS 563 - Natural Language Processing or
• IST 664 - Natural Language Processing 3 credit(s)
• LIN 591 - Second Language Acquisition 3 credit(s)
• LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
• PHI 552 - Modal Logic 3 credit(s)
• PHI 565 - Philosophy of Language 3 credit(s)
• PHI 573 - Philosophy of Physical Science 3 credit(s)
• PHI 665 - Problems in Philosophy of Language 3 credit(s)
• PHI 651 - Logic and Language 3 credit(s)
• CSD 523 - Normal Development of Speech and Language

• LIN 621 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
• LIN 622 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
• LIN 626 - Structure of Standard Arabic 3 credit(s)
• LIN 673 - Language Variation and Change 3 credit(s)
• SPA 636 - The Structure of Spanish 3 credit(s)

**Foreign Language Requirements (3 Credits) or LIN 600 Field Methods (3 Credits)**
To fulfill the Foreign Language Requirement, a student in the Linguistic Theory concentration must enroll in a language class other than her/his native language or English designated as [LANGUAGE DESIGNATION] 620. The language must be selected in consultation with the Concentration Advisor and cannot be a language the student has significant familiarity with. The student must fulfill all the requirements of the course, will receive a grade in that course, and will earn 3 credits toward her/his degree. In addition, to complete the requirement, the student must write two papers (of approximately 15 pages each) on the phonology and one on the syntax of the particular language. These papers are graded by the Concentration Advisor or other faculty to be designated by the Concentration Advisor. Successful completion of the language course and the two papers completes the foreign language requirement. The student will enroll in the relevant language course by her/his third semester in the MA program.

With the permission of the Concentration Advisor, this requirement can also be fulfilled by taking LIN 600 Field Methods, when offered.

Thesis Option: In substitution for six of the elective credits, the student may prepare a thesis under the supervision of the concentration advisor and other faculty participating in the Program and on a topic approved by the Program.

Degree Total: 30 Credits

5. Logic and Language
Concentration Advisor
Kevan Edwards
Assistant Professor
Office: 525 Hall of Languages
Tel: 315-443-5821
Email: kedwar02@syr.edu

Equivalent or alternative courses may be substituted for any of the courses listed below by approval of the program. Be aware that certain courses may have prerequisites, e.g., LIN 641 - Syntactic Analysis must be taken before LIN 741 - Advanced Syntax, LIN 601 - Introductory Linguistic Analysis must be taken before LIN 631 - Phonological Analysis or LIN 641 - Syntactic Analysis, and CSD 616 - Introduction to Applied Phonetics must be taken before CSD 638 -
College of Arts and Sciences

Clinical Phonology or CSD 643 (Phonological Disability).

Linguistics Core Courses (12 Credits)
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 641 - Syntactic Analysis 3 credit(s)
- LIN 571 - Topics in Sociolinguistics 3 credit(s)

Concentration Area Required Courses (6 Credits)

Required:
- PHI 651 - Logic and Language 3 credit(s)

Formal Languages. Choose one of the following:
- PHI 551 - Mathematical Logic 3 credit(s)
- PHI 552 - Modal Logic 3 credit(s)
- CIS 637 - Formal Languages
- CIS 661 - Logic Programming I 3 credit(s)
- CIS 662 - Logic and Programming II
- CIS 672 - Mathematical Logic I 3 credit(s)
- CIS 673 - Mathematical Logic II

Concentration Area Elective Courses (6-12 Credits)

a. Additional Courses from list of Formal Languages

b. Any concentration-advisor-approved graduate linguistic (LIN) course

c. Any concentration-advisor-approved philosophy (PHI) course numbered 700 or above

d. Any of the following
- PHI 533 - Philosophy of Mind
- PHI 565 - Philosophy of Language 3 credit(s)
- PHI 573 - Philosophy of Physical Science 3 credit(s)
- PHI 575 - Philosophy of Social Science 3 credit(s)
- PHI 665 - Problems in Philosophy of Language 3 credit(s)
- PHI 673 - The Structure of Science 3 credit(s)
- PHI 687 - Proseminar: Language, Epistemology, Mind and Metaphysics 3 credit(s)
- PHI 663 - Logics for Artificial Intelligence
- CIS 763 - Formal Foundations of Computational Linguistics
- CIS 767 - Mathematical Theory of Computation 3 credit(s)
- LIN 741 - Advanced Syntax 3 credit(s)
- LIN 626 - Structure of Standard Arabic 3 credit(s)
- LIN 673 - Language Variation and Change 3 credit(s)
- SPA 636 - The Structure of Spanish 3 credit(s)

6. Teaching languages (English Language Teaching/Foreign Language Teaching):

Concentration Advisor
Amanda Brown
Associate Professor
Office: 323C HBC
Tel: 315-443-2244
Email: abrown08@syr.edu

Equivalent or alternative courses may be substituted for any of the courses listed below by approval of the program. Be aware that certain courses may have prerequisites, e.g., LIN 641 - Syntactic Analysis must be taken before LIN 741 - Advanced Syntax, LIN 601 - Introductory Linguistic Analysis must be taken before LIN 631 - Phonological Analysis or LIN 641 - Syntactic Analysis, LIN 601 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching must be taken before LIN 622 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching.

Linguistics Core Courses (12 Credits)
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 631 - Phonological Analysis 3 credit(s)
- LIN 641 - Syntactic Analysis 3 credit(s)
- LIN 571 - Topics in Sociolinguistics 3 credit(s)

Concentration Area Required Courses (6 Credits)
- LIN 621 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
- LIN 622 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching 3 credit(s)

A. Select 2 of the following courses in consultation with the concentration advisor:

Assessment
- EDU 655 - Education Tests and Measurements 3 credit(s)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)
- IDE 741 - Concepts and Issues in Educational Evaluation 3 credit(s)

Evaluation 3 credit(s)

Language Acquisition
- CSD 622 - Development of Speech and Language 3 credit(s)
- LIN 591 - Second Language Acquisition 3 credit(s)
- LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s)
- LIN 691 - Universal Grammar and Second Language Acquisition 3 credit(s)

Learning Populations
- CSD 616 - Introduction to Applied Phonetics 3 credit(s)
- CSD 623 - Language Disorders of Early Childhood 3 credit(s)
- CSD 731 - Language Disorders in School-Age Children 3 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- HED 605 - The American College and University 3 credit(s)
- HED 712 - Research on the College Student 3 credit(s)
- IDE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s)
- IDE 771 - Methods and Techniques for Teaching and Training Adults 3 credit(s)
- RED 626 - Early Intervention for Children's Reading Problems 3 credit(s)

Literacy
- ELL 625 - Methods of Teaching Literacy to English Language Learners 3 credit(s)
- ELL 635 - Methods of Literacy Across the Curriculum for English Language Learners 3 credit(s)
- RED 607 - Issues in Multicultural Literacy 3 credit(s)
- RED 746 - Perspectives on Literacy and Technology 3 credit(s)

Materials Design
- IDE 611 - Technologies for Instructional Settings 3 credit(s)
- IDE 621 - Principles of Instruction and Learning 3 credit(s)
- IDE 631 - Instructional Design and Development I 3 credit(s)
- IDE 632 - Instructional Design and Development II 3 credit(s)
- IDE 656 - Computers as Critical Thinking Tools 3 credit(s)
- IDE 736 - Motivation in Learning and
Mathematics Education,

The following research groups are currently represented in the department. The Department of Mathematics has 31 faculty members, with research interests in several areas of mathematics, statistics, and mathematics education, and approximately 55 graduate students. The department is housed in the recently renovated Carnegie Library building on the main campus quadrangle. Programs of study include those for M.S. and Ph.D. degrees in Mathematics, with or without a concentration in Statistics, and for M.S. and Ph.D. degrees in Mathematics Education.

M.S. in Mathematics Education

The School of Education in cooperation with the Department of Mathematics in the College of Arts and Sciences offer a program leading to the degree of Master's of Science in Mathematics Education. The Preparation Program is for students with an undergraduate major in mathematics who wish to teach in secondary schools. This program provides for preservice education of mathematics majors. The Preparation Program consists of a minimum of 30 hours, and requires at least two courses in mathematics and a Master's exam or thesis.

Research Areas

The department’s Colloquium series features weekly lectures by mathematicians from all over the United States and abroad in many of the areas of mathematical research represented in the department. Furthermore several of the research groups organize regular research seminars. Colloquium and seminar schedules, along with other information about our programs, courses, and events, can be found at math.syr.edu.

The following research groups are currently represented in the department.

Algebra

Algebraic geometry (moduli spaces of curves, equations defining finite sets of points), commutative algebra (homological algebra, Cohen-Macaulay modules, characteristic p), non-commutative algebra (representations of finite-dimensional algebras, homological algebra, group actions on non-commutative rings, Hopf algebras, enveloping algebras, non-commutative algebraic geometry). Faculty: Diaz, Kleiner, Leuschke, Miller, Quinn, Zacharia.

Analysis

Complex analysis (several complex variables, pluripotential theory, complex dynamics, invariant metrics, holomorphic currents, Kähler geometry, rigidity problems), geometric analysis (PDE on manifolds, geometric flows), harmonic analysis, partial differential equations (linear and nonlinear elliptic PDE, boundary value problems on nonsmooth domains), geometric function theory (quasiconformal mappings, analysis on metric spaces). Faculty: Coman, Iwaniec, Kovalev, Lanzani, Onninen, Poletsky, Verchota, Vogel, Wylie, Yuan.

Applied Mathematics

Numerical analysis (approximate solutions of elliptic PDE, generalized finite element methods and meshless methods), nonlinear variational problems (microstructure in nonlinear elasticity), and computational harmonic analysis (wavelets, digital image processing), numerical linear algebra, computational fluid dynamics. Faculty: Banerjee, Lutoborski, Shen, Wang.

Combinatorics

Combinatorics, graph theory, rigidity theory, symmetries of planar graphs, automorphism groups of graphs. Faculty: Graver.

Geometry/Topology

Low-dimensional topology and knot theory (knot concordance, Heegaard Floer homology, homology theories for knots and links), K-theory (topological K-theory of Eilenberg-Mac Lane spaces, equivariant homotopy theory), Riemannian/ Kähler geometry (Ricci curvature and topology, special metrics, geometric flows, rigidity problems). Faculty: Ucci, Weyl, Wylie, Yuan.

Statistics

Ranking and selection theory (applications in radar signal processing and two-stage procedures for on sample problems), change-point problems, sequential analysis, longitudinal analysis, neural networks. Faculty: Chen, Kim, Volterman.

Graduate Awards
Figures for graduate appointments represent 2016-2017 stipends.

Graduate Scholarships:
Support graduate study for students with superior qualifications; provide, in most cases, full tuition for the academic year.

Graduate Assistantships:
Offered to most Graduate Scholarship recipients; no more than an average of 15 hours of work per week; nine months; stipend ranging from $17,589 to $21,494 in addition to tuition scholarship for 24 credits per year. Additional summer support is generally available.

Syracuse University Graduate Fellowships:
Tax-free stipends are $24,795 for nine months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 credits during the academic year.

Facilities
The mathematics collection is held within the Carnegie Library and currently includes over 34,000 books. Many of the resources are online and include MathSciNet, Current Index to Statistics, Jahrbuch Database, MathEduc, ERIC, Scopus, and Web of Science, and over 350 mathematics journal subscriptions.

In addition to covering a broad range of pure and applied mathematics, the collection contains print and electronic resources in the history of mathematics, mathematics education, and statistics. The following resources are available for student borrowing from the Carnegie Library service desk: TI graphing calculators, geometry kits, and course reserve books.

The computer lab in Carnegie Library, Room 208, has 16 computers, and a color printer with copying and scanning capability. The lab computers provide extensive software for statistical or data analysis, data base management, programming, and graphics. More information on computing services and the software available for students may be found on the ITS website: https://its.syr.edu/computer-labs/index.html.

The Carnegie Library contains over 210,000 volumes in the sciences, including biology, chemistry, engineering and computer science, library and information science, nutrition science and dietetics, public health, physics & astronomy, photography, technical arts, pure and applied mathematics, probability and statistics, mathematics education, and military and naval sciences. The historic Reading Room provides a quiet place for students to study and use library resources.

Mathematics, MS

Chair

Faculty

The Department of Mathematics has 32 faculty members, with research interests in several areas of mathematics, statistics, and mathematics education, and approximately 55 graduate students. The department is housed in the recently renovated Carnegie Library building on the main campus quadrangle. Programs of study include those for M.S. and Ph.D. degrees in Mathematics, with or without a concentration in Statistics, and for M.S. and Ph.D. degrees in Mathematics Education.

M.S. in Mathematics
The Department of Mathematics offers two programs leading to the Master's of Science in Mathematics degree. The programs are (1) Mathematics (including pure and applied mathematics) and (2) Statistics. Master's programs share MAT 601 - Fundamentals of Analysis I and MAT 631 - Introduction to Algebra I as common foundations, and there is additional overlap between them.

Thirty credits of graduate work are required, of which at least 18 must be at the 600-level or above, and at least 15 of those 18 credits must be in the mathematics department. In the mathematics option the student must also complete MAT 602 - Fundamentals of Analysis II, MAT 632 - Introduction to Algebra II, and a sequence in applied mathematics from an approved list of sequences. In the statistics option several particular courses are required.

Students must have at least a B average in the 15 credits of 600-level or above mathematics department courses and at least a B average in the 30 credits of coursework comprising the degree program. No master's thesis is required.

Joint and Concurrent Degree Programs-Mathematics and Computer Science
In collaboration with the Department of Electrical Engineering and Computer Science in the College of Engineering, we offer concurrent M.S. degrees in mathematics and computer science. Students complete a total of 51 credits, 30 in mathematics and 21 in computer science. Students who want to pursue this program should have a solid background in undergraduate mathematics, and knowledge of programming in high-level languages and of algorithms and data structures adequate for graduate study in computer science.

Research Areas
The department's Colloquium series features weekly lectures by mathematicians from all over the United States and abroad in many of the areas of mathematical research represented in the department. Furthermore several of the research groups organize regular research seminars. Colloquia and seminar schedules, along with other information about our programs, courses, and events, can be found at math.syr.edu.

The following research groups are currently represented in the department.

Algebra
Algebraic geometry (moduli spaces of curves, equations defining finite sets of points), commutative algebra (homological algebra, Cohen-Macaulay modules, characteristic p), non-commutative algebra (representations of finite-dimensional algebras, homological algebra, group actions on non-commutative rings, Hopf algebras, enveloping algebras, non-commutative algebraic geometry); Faculty: Diaz, Kleiner, Leuschke, Miller, Quinn, Zacharia.

Analysis
Complex analysis (several complex variables, pluripotential theory, complex dynamics, invariant metrics, Kähler geometry, rigidity problems), geometric analysis (PDE on manifolds, geometric flows), harmonic analysis, partial differential equations (linear and nonlinear elliptic PDE, boundary value problems on nonsmooth domains), geometric function theory (quasiconformal mappings, analysis on metric spaces); Faculty: Coman, Iwaniec, Kovalev, Lanzani, Onninen, Polotsky, Verchota, Vogel, Wylie, Yuan.

Applied Mathematics
Numerical analysis (approximate solutions of elliptic PDE, generalized finite element methods and meshless methods), nonlinear variational problems (microstructure in nonlinear elasticity), and applied computational harmonic analysis (wavelets, digital image processing), numerical linear algebra, computational fluid dynamics. Faculty: Banerjee, Lutoborski, Shen, Wang.

Combinatorics
Combinatorics, graph theory, rigidity theory, symmetries of planar graphs, automorphism groups of graphs. Faculty: Graver.

Geometry/Topology
Low-dimensional topology and knot theory (knot concordance, Heegaard Floer homology, homology theories for knots and links), K-theory (topological K-theory of Eilenberg-Mac Lane spaces, equivariant homotopy theory), Riemannian/Kähler geometry (Ricci curvature and topology,
special metrics, geometric flows, rigidity problems). Faculty: Ucci, Wehrli, Wylie, Yuan.

Mathematics Education

Probability
Interacting particle systems, Brownian motion, random walks, probabilistic methods in mathematical finance, martingales. Faculty: Cox, Griffin, McConnell.

Statistics
Ranking and selection theory (applications in radar signal processing and two-stage procedures for multinomial problems), change-point problems, sequential analysis, longitudinal analysis, neural networks. Faculty: Chen, Kim, Wolterman.

Graduate Awards
Figures for graduate appointments represent 2016-2017 stipends.

Graduate Scholarships:
Support graduate study for students with superior qualifications; provide, in most cases, full tuition for the academic year.

Graduate Assistantships:
Offered to most Graduate Scholarship recipients; no more than an average of 15 hours of work per week; nine months; stipend ranging from $17,589 to $21,494 in addition to tuition scholarship for 24 credits per year. Additional summer support is generally available.

Syracuse University
Graduate Fellowships:
Tax-free stipends are $24,795 for nine months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 credits during the academic year.

Facilities
The mathematics collection is held within the Carnegie Library and currently includes over 34,000 books. Many of the resources are online and include MathSciNet, Current Index to Statistics, Jahrbuch Database, MathEduc, ERIC, Scopus, and Web of Science, and over 350 mathematics journal subscriptions.

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The Carnegie Library contains over 210,000 volumes in the sciences, including biology, chemistry, engineering and computer science, library and information science, nutrition science and dietetics, public health, physics & astronomy, photography, technical arts, pure and applied mathematics, probability and statistics, mathematics education, and military and naval sciences. The historic Reading Room provides a quiet place for students to study and use library resources.

Medicolegal Death Investigation, MS

Contact:
Michael Sponsler
315-443-4880
sponsler@syr.edu

Faculty:
Robert Silver, James T. Spencer, Michael B. Sponsler, Kevin Sweder, Ulrich Englisch, David Knaebel, Shannon Novak, Sanjay Chhablani, James Hewett

Description:
The M.S. in Medicolegal Death Investigation is a focused degree program designed to prepare students for all aspects of a career as a death investigator.

This degree is intended for students who have selected this career path, and the objective is to prepare them both for the various aspects of this occupation (case investigation, understanding the body along with pathologies and trauma, autopsy, interviewing skills, securing and documenting evidence, courtroom testimony), as well as working effectively with and understanding other professionals whose roles intersect with death investigation (forensic pathologists, forensic scientists, crime scene investigators, law enforcement officers, toxicologists, and other medical and legal personnel). Graduates of this program will be exceptionally well prepared for this career relative to most applicants for the positions.

Total Credits: 36
Gateway Courses: 27 Credits

Required
- FSC 606 - Advanced Forensic Science 3 credit(s)
- FSC 631 - Statistics for Forensic Science 3 credit(s)
- FSC 633 - Quality Assurance and Ethics 3 credit(s)
- FSC 635 - Medicolegal Death Investigation I 3 credit(s)
- FSC 636 - Medicolegal Death Investigation II 3 credit(s)

Electives: 6 Credits Required
- FSC 651 - Forensic Pathology 3 credit(s)
- FSC 663 - Bloodstain Pattern Analysis 3 credit(s)
- FSC 668 - Crime Scene Investigation 3 credit(s)

Internship: 3 Credits Required
Each student is required to participate in an internship in a medical examiner’s office, related to forensic pathology and/or medicolegal death investigation. Credits in excess of 3 will be counted as elective credits.

FSC 690 - Independent Study in Forensic Science 1-6 credit(s)

Pan African Studies, MA
Chair
200 Sims Hall
315-443-4302

Faculty
Joan Bryant, Horace Campbell, Linda Carty, David Kwame Dixon, Kishi Animashaun Ducre, Casarea Gibson, Janis A. Mayes, Herbert Ruffin, S.N. Sangmpam, Renate Simson, Kheli R. Willetts, James G. Williams

M.A. in Pan African Studies
The M.A. degree in Pan African Studies is a 30-credit program offering students a comprehensive understanding of the global African experience. This interdisciplinary program is structured around:

Four core courses (AAS 525, AAS 610, AAS 611, and AAS 612)
Two electives (Advance research methods & Advance theory)
An external site experience (AAS 670)
A thesis (AAS 997)

Courses explore the Pan African experience as reflected in multiple historical, social, and political contexts, most notably in Africa, the Caribbean, and the United States. With the approval of the Graduate Committee, students may participate in the Scholar Exchange Program, a cooperative relationship with the University of Rochester and Cornell University.

This innovative program is distinct from any other of its kind. It has a unique experiential component that requires a residency at an external site at which the department either runs a Syracuse University Abroad (SU Abroad) program, or has established an institutional affiliation. This experience offers students alternative academic exposure while confronting them with the challenge of merging theory and practice as they learn to operationalize Pan African Studies in the larger world.

The targeted sites are located in Africa, the Caribbean, Europe, Canada, and the United States. At the site, students complete a pre-approved project involving research, practical education, independent study, an internship, or a related activity. Two of the graduate courses that contribute to the core offerings in the program, AAS 611 - Arts, Cultures and Literatures of the Pan African World and AAS 612 - Histories, Societies and Political Economies of the Pan African World, are unlike any courses offered in similar graduate programs around the country. The courses create a comprehensive framework that brings together concentrations from specific disciplinary foci, as well as the transformations in those foci that have occurred through the Black encounter.

Students learn to appreciate intellectual nuances, dynamism, and diversification as these pertain to Pan African Studies, a layered and complex field of academic engagement. Of equal importance, they are taught to engage the silences inherent in many disciplines and paradigms, including those associated with traditional Africana studies approaches. The M.A. in Pan African Studies degree exposes students to the arts, the humanities, and the social sciences, and incorporates a wider global framework against which the spectrum of the entire Black world is critically, comparatively, and contrastively examined and theorized.

The program aims to produce well-groomed, master's-level scholars ready either to proceed to doctoral studies in the humanities or the social sciences, or to enter the world of work. Potential areas of employment include the local non-governmental sector, international organizations, social services, criminal justice, education, and health care, among others.

Program of Study

Required Core Courses (12 credits from core courses)
- AAS 525 - Research Methods in African American Studies 3 credit(s)
- AAS 610 - Seminar in Pan Africanism: Research and Reading 3 credit(s)
- AAS 611 - Arts, Cultures and Literatures of the Pan African World 3 credit(s)
- AAS 612 - Histories, Societies and Political Economies of the Pan African World 3 credit(s)
- AAS 670 - Experience Credit 1-6 credit(s)
- AAS 997 - Master's Thesis 6-9 credit(s)

Additional Information
(The thesis serves as the required “exit” experience of students.)

Two Additional Courses
Students must take two additional courses: advance research methods & advance theory, for a total 6 credits. Before registering for a course from list A, B, or any non-listed course, students must obtain the approval of their advisors and/or the chairperson of the Graduate Studies Committee in the Department of African American Studies.

List A:
Roster of additional courses offered by or cross-listed with the Department of African American Studies (Includes courses formally cross-listed with the Department of African American Studies. Where relevant, the sponsoring department is emphasized).

AAS 500 - Selected Topics 1-6 credit(s) African American Studies: Research and Readings (AA)
AAS 501 - African American Sociological Practice:1900-45 3 credit(s) (AA)
AAS 510 - Studies in African American History 3 credit(s) (AA)
AAS 512 - African American Women's History 3 credit(s) (AA)
AAS 513 - Toni Morrison: Black Book Seminar 3 credit(s) (AA)
AAS 543 - Religious Cultures of the American South (AA)
AAS 600 - Selected Topics 1-6 credit(s) Pan African Studies (A, AA, AC)
AAS 620 - Black Women Writers 3 credit(s) African American/Caribbean/African (A, AA, AC)
AAS 627 - New York City: Black Women Domestic Workers 3 credit(s) (AC)
AAS 631 - Seminar in African Drama and Theater 3 credit(s) (A)
- AAS 634 - Underground Railroad 3 credit(s)
- ANT 694 - Underground Railroad 3 credit(s)
- ANT 640 - Topics in African Archaeology
AAS 645 - The Caribbean: Sex Workers, Transnational Capital, and Tourism 3 credit(s) (AC)
AAS 670 - Experience Credit 1-6 credit(s) (A, AA, AC)
AAS 671 - Caribbean Intellectual Thought 3 credit(s) (AC) **
PSC 800 - Selected Topics 1-6 credit(s) (AC) **
AAS 681 - Comparative State, Society Relations 3 credit(s) (A, AA, AC)
AAS 690 - Independent Study 1-6 credit(s) (A, AA, AC)
AAS 700 - Seminar in African American Studies 3 credit(s) (AA)
AAS 731 - Militarism and Transformation in South Africa 3 credit(s) (A)
PSC 780 - Seminar on Political Systems 3 credit(s) (A) **
AAS 765 - Readings and Research in African History 3 credit(s) (A)

Note:
*Cross-listing requested
**Political Science will cross list as a special topic course on a semester by semester basis.

List B:
Roster of courses offered by other departments
The following are examples of courses, in which students may elect to enroll, subject to the approval of their advisors and the chairperson of the Graduate Committee of the Department of African American Studies. Enrollment is also conditional upon consultation with the instructor of the course regarding any prerequisites and the suitability of the course to a particular student's academic interests and previous academic preparation. List B will vary from semester to semester depending on what is offered by other
departments. As a general rule, list B courses give attention to the Pan African experience in a more limited fashion than those in list A, perhaps by devoting a unit of study over several sessions or weeks to topics which relate directly or indirectly to the Pan African experience. These include:

EDP 626 - Cross Cultural Counseling
  • ANT 553 - Women and Social Change 3 credit(s)
  • ANT 756 - Development Anthropology 3 credit(s)
  • SWK 628 - Human Diversity in Social Contexts 3 credit(s)
LAW 758 - Civil Rights

Additional Information
Other options will be identified and added as the program progresses and as needs arise. The AAS Graduate Studies Committee will continue to foster networking with relevant departments targeted for cross listing. As this process continues, courses identified will be added to the standing list.

Graduate Awards
Teaching Assistantships in the Department of African American Studies carry a substantial stipend and tuition scholarship of 24 credits (6 of which can be used during the summer). Preference is given to graduate students in Pan African Studies. Teaching Assistantships work within the Department of African American Studies for 20 hours per week. Appointments to assistantships are made by the Department of African Studies with the concurrence of the Graduate School. Students are responsible for directly notifying the Department of African American Studies of their interest.

Graduate Fellowships are awards to support graduate training for African American studies students (United States citizens and permanent residents) with outstanding qualifications. Awards are made by the Dean of the Graduate School, upon recommendations of the African American Fellowship Committee.

They are intended for individuals whose graduate study involves the integration of African American/ Pan African studies into their respective fields of study. Each fellowship includes a substantial stipend, plus a tuition scholarship for 30 credits per academic year.

André Gallois, Samuel Gorovitz, Mark Heller, Kris McDaniel, Hille Paakkunainen, Kara Richardson, Michael Rieppel, Nathaniell Sharadin, David Sobel, Laurence Thomas, Robert Van Gulick

The graduate program in philosophy offers study in the core areas of Anglo-American philosophy. It also offers work on the thought of some of the major figures of the history of philosophy, e.g., Plato, Aristotle, Hume, Leibniz, Spinoza, Descartes, and Kant. The department believes that each student's education should include some study of the history of philosophy whether or not the student's interests are primarily historical. The program is designed to prepare students both to teach philosophy and to contribute to the advance of philosophical inquiry.

There are generally 40 full-time philosophy graduate students in residence at Syracuse. Most full-time students in the Ph.D. program are awarded financial assistance in the form of a teaching assistantship, a fellowship, or a tuition scholarship.

M.A. in Philosophy
The student seeking the M.A. in philosophy will ordinarily complete 24 credits of coursework and defend viva voce a 6-credit master's thesis. With the permission of the department, a student admitted to the Ph.D. Program may receive the M.A. in philosophy after completing all pre-dissertation requirements for the Ph.D. degree.

Programs in Philosophy and Law
The Philosophy Department joins with the College of Law in offering an opportunity to pursue the J.D./M.A. Philosophy or the J.D./Ph.D. Philosophy degrees at the same time. See the departmental web site at http://philosophy.syr.edu/GradStudiesinfo.htm for a more detailed description of these programs.

Physics, MS
Chair
A. Alan Middleton
201 Physics Building,
315-443-3901.

Faculty

The Department of Physics has 30 faculty members, 18 postdoctoral research associates, and about 75 graduate students. The department is housed in the modern, six-floor physics building overlooking the University's main quadrangle. Facilities include state-of-the-art laboratory space, high-performance computing resources, and a machine shop, in addition to numerous specialized research facilities maintained by the research groups described below.

The department runs a weekly colloquium series that brings scientists from the United States and abroad to the University to present research and exchange ideas. There are also several research seminar series run by the different research groups. Colloquia and seminar schedules (along with other information about our program, courses, and events) can be found on the Internet at physics.syr.edu.

Degree Programs
All entering students must take a comprehensive examination. Those who perform unsatisfactorily may be required to take and pass remedial courses. However, any associated offer of financial support is not contingent upon passing this examination.

M.S. in Physics
The degree can be achieved in any of three ways: (a) a thesis (involving 6 credits of PHY 997) in addition to 24 credits of regular course work; (b) a minor problem (involving PHY 890) and passing the qualifying examination with 30 credits of regular coursework; or (c) passing the qualifying examination with 36 credits of regular coursework. The courses taken must include

• PHY 581 - Methods of Theoretical Physics I 3 credit(s)
• PHY 614 - Graduate Laboratory 3 credit(s)
• PHY 651 - Instrumentation in Modern Physics 3 credit(s)
• PHY 661 - Classical Mechanics 3 credit(s)
• PHY 641 - Advanced Electromagnetic Theory I 3 credit(s)
• PHY 661 - Quantum Mechanics I 3 credit(s)
• PHY 662 - Quantum Mechanics II 3 credit(s)

Additional Information
No more than three credits of PHY 690 or PHY 890 can count toward the M.S. degree. Students must maintain a B average.

Research Areas
The department has several strong research groups from which former students and post-doctoral associates have gone on to distinguished careers at universities and in industry. Graduate work in physics presently encompasses the fields described below.

Theoretical
Condensed Matter
Research in this area includes ongoing studies of soft matter systems, dynamical systems, granular materials, and disordered matter. Faculty study the mechanics of mesoscopic constructed materials and biological tissues. The dynamics of active matter, including reconstituted biological systems and living cells and flocks, is an active area of study. The glassy dynamical behavior and statistical physics of materials with disorder is studied, using connections with advanced algorithms to model complex systems. Flow and plastic deformation in jammed and glassy solids (as in metallic glasses, foams and granular materials) are the object of research work. Bowick, Manning, Marchetti, Middleton, Schwarz. Three postdoctoral fellows.

Elementary Particles and Fields Quantum field theory and quantum gravity. Supersymmetry and its application to quantum gravity and models of Beyond Standard Model Physics. Strongly coupled dynamics via effective field theory and lattice field theory. LHC phenomenology and lattice QCD. Inflation, the generation of density perturbations, the origin of dark matter and dark energy, baryogenesis and the cosmic microwave background radiation. Particle cosmology. Armendariz-Picon, Catterall, Fan, Hubisz, Laiho, Watson. Two postdoctoral fellows.

High Energy Experimental Particle Physics
Experimental studies of the fundamental Electroweak and Strong Interactions as manifested by the decays of beauty and charm quarks and production of other “exotic” phenomena. These studies are mostly performed as part of the LHCb experiment at the Large Hadron Collider located at CERN in Geneva, Switzerland. We are primarily interested in how new physics phenomena manifests itself in CP violating and rare B meson decays. We also perform R&D leading to advanced silicon micro-pattern detectors, such as pixel and microstrip strip sensors, and their related readout electronics. The group is also active in neutrino flavor oscillation research, using neutrino beams created at Fermilab in Chicago, Illinois. Our neutrino program involves R&D on the development of liquid argon neutrino detectors, as proposed for use in the MicroBooNE and LBNE experiments. Members of the group have discovered several new particles, including the B, Ds, Y(1D) and made the first measurements of several very important decay modes of these objects. Artuso, Blusk, Mountain, Skwarnicki, Soderberg, Stone and Wang. Four postdoctoral fellows.

Intermediate Energy Particle Physics
Use of spin degrees of freedom to study quantum chromodynamics and the Standard Model at low energies. Experiments are underway at Stanford Linear Accelerator Center (SLAC) and at Thomas Jefferson National Accelerator Facility (JLAB). Holmes, Souder. 1 postdoctoral fellow

Gravitational-wave Astronomy and Astrophysics

Semiconductors, Thin Films, and Solar Cells

Quantum mechanics and nanoscale devices

Dark Matter
Development of improved ultra-low-radioactivity detectors and environments including detectors of Weakly Interacting Massive Particles, analysis of data from dark matter searches. Member of the Cryogenic Dark Matter Search and DEAP/CLEAN collaborations. Schnien. One postdoctoral fellow.

Graduate Awards
Figures for graduate appointments represent 2016-2017 stipends.
Graduate Scholarships support graduate study for students with superior qualifications; provide, in most cases, full tuition for academic year.
Graduate Teaching Assistantships offered to most Graduate Scholarship recipients; nine months; stipend of $24,000.00 (2016-2017) and tuition scholarship up to 24 credits (8 courses). Summer assistantships may be available. The assistant spends up to 20 hours per week engaged in teaching laboratory or recitation classes and in grading and preparation.
Graduate Research Assistantships no more than an average of 20 hours of work per week; a nine-month stipend of at least $24,000.00 (2016-2017) and tuition scholarship up to 24 credits (8 courses). Summer assistantships may be available. The research assistant is normally paid for research work performed in conjunction with a faculty member and leading to the master's or doctor's dissertations.
Syracuse University Fellowships Tax-free stipends of $24,795.00 (2016-2017) for nine months of full-time study; tuition scholarship for a total of 30 credits during the academic year.

Religion, MA
Chair: 501 Hall of Languages 315-443-3863

Experimental

Astrophysics of the Interstellar Medium and Planetary Atmospheres
Laboratory studies of physical and chemical processes occurring in the interstellar medium and in planetary atmospheres, including formation of molecular hydrogen and hydrogenation and oxidation reactions on interstellar and/or planetary dust grain analogues. Vidali.

Biological and Medical Physics
Experimental studies of photosensory transduction in single-celled model microorganisms, using nonlinear systems physiology approaches; bioinformatics; phylogenetics and molecular clocks; technology development for telemedicine and human-computer interfacing; image processing in nuclear medicine and magnetic resonance imaging. Forstner, Foster, Krol, Lipson, Movileanu, Saranaik.

Computational Physics
Numerical studies of random surfaces, liquid membranes; study of quantum gravity as a theory of dynamically triangulated meshes; analysis of phase transitions and phase structure in disordered systems; gravitational waveforms from coalescences of astrophysical binary systems; gravitational wave data analysis; numerical simulations on parallel computers; connections between algorithms and physical principles; lattice quantum chromodynamics. Application of distributed processing to large scale quantum theory problems. Bowick, Brown, Catterall, Couvares, Fisher, Laiho, Marchetti, Middleton. One postdoctoral fellow.

Intermediate Energy Particle Physics
Use of spin degrees of freedom to study quantum chromodynamics and the Standard Model at low energies. Experiments are underway at Stanford Linear Accelerator Center (SLAC) and at Thomas Jefferson National Accelerator Facility (JLAB). Holmes, Souder. 1 postdoctoral fellow

Gravitational-wave Astronomy and Astrophysics

Semiconductors, Thin Films, and Solar Cells
In the M.A. program students work to improve proficiency in the use of the Spanish language. All but three credits of coursework must be taken in Spanish and students have ongoing opportunities to develop their reading, writing, speaking, and listening skills at a professional level. The program also permits students to study abroad in a Spanish-speaking country.

The M.A. program provides students with thorough training in research, including the scholarship of discovery, application, dissemination, and teaching. The program enables students to become proficient and discriminating in the use of scholarly resources available at libraries and via the Internet.

Students are prepared to be effective and committed language instructors. They acquire computer skills relevant to scholarship in the areas of literary criticism and language instruction. They have the opportunity to obtain the Certificate in University Teaching through participation in the Future Professoriate program.

Program Requirements

Students must complete 33 credits above the bachelor's degree for the Spanish master's. With Spanish faculty approval, up to three of these credits may be taken outside the Spanish program in a related field of study. SPA 601 - Literary Theory and Research Methods is required of all students.

All students must complete a seven-part M.A. qualifying exam and oral defense to graduate from the program. Exceptional students may choose to write an M.A. thesis in addition to the exams. Students who choose to write a thesis may register to write an M.A. thesis in addition to the exams. All students must complete a seven-part M.A. qualifying exam and oral defense to graduate from the program. Exceptional students may choose to write an M.A. thesis in addition to the exams. Students who choose to write a thesis may register to write an M.A. thesis in addition to the exams.

Students who choose to write a thesis may register for up to three thesis credits and may be exempt from the one exam area most closely related to the thesis.

Spanish Language, Literature and Culture, MA

Alicia Ríos
323B HBC
315-443-5379

The M.A. in Spanish language and literature is designed to meet a variety of student goals. The program provides students with thorough preparation for further study at the doctoral level. It also meets the needs of students for whom the master's degree is a terminal degree and who wish to pursue job opportunities in areas where critical thinking, leadership qualities, and clear, persuasive communication are valued, especially when a superior knowledge of Spanish language and culture is called for.

The M.A. program provides all students with an intensive and balanced introduction to the literature and culture of the Hispanic world, from the pre-Columbian period to the present. Students may take courses in the Renaissance and Baroque periods in Spain and Latin America, the literatures and cultures of contemporary Spain, the Caribbean and Southern Cone of Latin America, and Hispanic linguistics. In addition to the traditional coverage of literary periods, genres, and major authors, students are introduced to a variety of current theoretical and methodological approaches and to the orientations of contemporary theory. Those students interested particularly in linguistics may study general linguistics as well as Hispanic linguistics in the department.

In the M.A. program students work to improve proficiency in the use of the Spanish language. All but three credits of coursework must be taken in Spanish and students have ongoing opportunities to develop their reading, writing, speaking, and listening skills at a professional level. The program also permits students to study abroad in a Spanish-speaking country.

Speech Language Pathology, MS

Chair:
Karen A. Doherty, Ph.D.
621 Skytop Road, Suite 1200

Contact:
Phone: 315-443-9637
Email: csd@syr.edu

Faculty


Clinical Faculty:

Megan Leece, Anita Lightburn, Meghan Lister, Sue
Program Description:
The clinical graduate programs in speech-language pathology and audiology at Syracuse University are nationally ranked, accredited programs with a long history of excellence. While pursuing a speech-language pathology or audiology degree, students have the opportunity to work with researchers in state-of-the-art laboratories and to learn from master clinicians in the areas of speech, language, and hearing. In addition, the location of the University provides students opportunities to gain clinical experience in diagnosis and treatment with a wide variety of clinical populations.

Master of Science Speech-Language Pathology
The M.S. program in speech-language pathology provides both substantive knowledge and practical experience through a carefully selected sequence of academic study, clinical practice, and research training. Students are prepared for a professional career in diagnosis and management of individuals with speech and language disorders. The typical master's degree program for a student with a background in communication disorders ranges from 46 to 53 credits and requires a minimum of four semesters and one summer. Students with undergraduate majors other than communication disorders need additional coursework. During the final semester, all students must pass a comprehensive examination or complete a master's thesis.

Completion of the master's program provides students with the academic and practicum qualifications for the certificate of clinical competence from the American Speech-Language-Hearing Association and for New York State licensure in speech-language pathology. Graduates may also fulfill the requirements for New York State teacher certification as a Teacher of Students with Speech and Language Disabilities.

Clinical Practice:
Students in speech-language pathology participate in a wide range of diagnostic and therapy experiences under the direct supervision of faculty and clinical staff. After obtaining at least 50 hours of on-campus clinical practicum in the department's Gebbie Speech-Language-Hearing Clinic, students also complete two off-site clinical experiences. These externship placements provide students with experience working in the field under the supervision of a certified speech-language pathologist. Placements include public schools, preschool programs, hospitals, rehabilitation centers, nursing homes, private clinics, and special education programs.

Accreditation:
The master of science program in speech language pathology is accredited by the Council on Academic Accreditation of the American Speech Language Hearing Association.

Admission:
Admission occurs once per year for fall entry. Applicants must complete a common application and a supplemental application by January 1 for fall admission consideration. See our website for links to the two online applications: http://csd.syr.edu/admissions_info/How-To-Apply.html

We also require GRE exams, undergraduate transcripts, and three letters of recommendation as part of the application. The minimum undergraduate GPA is 3.0, however, to be competitive it should be 3.5 or higher. The minimum GRE scores for consideration are: Verbal=145, Quantitative=146, and Writing=3.5. Additionally, international students must score a minimum of 105 on the TOEFL exam.

Financial Support:
All applicants are considered for departmental graduate scholarships and assistantships during the admissions process.

Facilities:
The CSD academic department and Gebbie Speech Language Hearing Clinic are located at 621 Skytop Road on South Campus.

Degree requirements:
The master's degree requires 46-53 graduate credits for students with a Bachelor's degree in Communication Sciences and Disorders (depending on background coursework) or 72-75 credits for students with no CSD background coursework.

Transfer Credit:
Students may petition to transfer up to 12 graduate credits from another university into the Master of Science program.

Part-time Study:
Part time study is not available in the Master of Science program.

Satisfactory Progress:
A student must graduate with a minimum GPA of 3.0. Students with an academic GPA of less than 2.6 at the end of the first semester in the degree program, or an academic or clinic GPA of less than 3.0 at the end of the first academic year, may be asked to leave the program.

Audiology, AuD
Chair

Contact:
Phone: 315-443-9637
Email: csd@syr.edu

Faculty
Karen Doherty, Joseph Pellegrino, Beth Priewe, Kathy Vander-Werff, plus adjunct instructors for specialty areas including: James Feuerstein, Lindsay Kurek, Trista Channels, Sarabeth Wojnowicz and Stefania Arduini

Clinical Faculty:
Tammy Kordas, Kristen Kennedy

Doctor of Audiology (Au.D.)
The department offers a clinical doctorate program in audiology culminating in the Doctor of Audiology (Au.D.) degree. The four-year program requires a student to complete 67 credits of academic coursework and 25 clinical practicum credits. The general educational objectives of the Au.D. program of study are to: (1) prepare audiology practitioners who are well-grounded in the basic sciences; (2) provide didactic coursework and supervised clinical practicum experiences necessary to enable students to develop competencies in the areas outlined by ASHA (Foundations of Practice, Prevention and Identification, and Evaluation and Treatment), and (3) expose students to research in an effort to develop skills that will allow them to use evidence-based approaches to clinical practice.

Any student holding a baccalaureate degree from an accredited college or university in this country, or its equivalent in a foreign institution, will be eligible for the Au.D. program in audiology. Potential students need not have an undergraduate degree in the field of speech and/or hearing sciences. However, in order to comply with ASHA standards, all students will need to take or show evidence of having taken coursework in math, science, social science, basic human communication processes, and speech/language disorders. If a student has not taken any of these courses as an undergraduate and needs to take them as part of the graduate program, then it may
add to the length of the student’s program.

Clinical Practice:

Students will have a wide variety of clinical experiences. They will begin work in the Gebbie Speech-Language-Hearing Clinic, where they will receive maximum supervision. Later in the program they will be placed at one of our local extern sites, which include clinical rotations in hospitals, private-practices, rehabilitation centers, and schools in the Syracuse area. We have extern sites located in less populated areas that serve more rural communities and other sites that are based in large metropolitan areas.

Students are not only exposed to a variety of diagnostic and rehabilitative modalities, but also have opportunities to observe procedures such as otologic surgeries and neuroimaging. In the fourth year, students will be engaged in a full-time clinical externship. At the conclusion of their academic and local clinic work, each student must pass an examination designed to comprehensively and intensively assess his/her academic and clinical preparation.

Accreditation:

The Doctor of Audiology (Au.D.) degree program in audiology is accredited by the Council on Academic Accreditation of the American Speech Language Hearing Association.

Admission:

Admission occurs once per year for fall entry. Applicants must complete a common application and a supplemental application by January 1 for fall admission consideration. See our website for links to the two online applications: http://csd.syr.edu/admissions_info/How-To-Apply.html

We also require GRE exams, undergraduate transcripts, and three letters of recommendation. The minimum GPA is 3.0, however, to be competitive it should be 3.5 or higher. The minimum GRE scores for consideration are: Verbal=145, Quantitative=146, and Writing=3.5. Additionally, international students must score a minimum of 105 on the TOEFL exam.

Financial Support:

All applicants are considered for departmental graduate scholarships and assistantships during the admissions process.

Facilities:

The CSD academic department and Gebbie Speech Language Hearing Clinic are located at 621 Skytop Road on South Campus.

Degree Requirements:

The program is made up of 92 graduate credits.

Transfer Credit:

Students may petition to transfer up to 12 graduate credits from another university into the Doctor of Audiology program.

Part-time Study:

Part time study is not available in the Doctor of Audiology program.

Satisfactory Progress:

A student is required to graduate with a minimum GPA of 3.0. Students with an academic GPA of less than 2.6 at the end of the first semester in the degree program, or an academic or clinic GPA of less than 3.0 at the end of the first academic year, may be asked to leave the program.

Audiology, AuD/PhD

Chair
Karen A. Doherty, Ph.D.
621 Skytop Road, Suite 1200
315-443-9637

Contact:
Phone: 315-443-9637
Email: csd@sy.edu

Faculty
Karen Doherty, Joseph Pelleggrino, Beth Prieve, Kathy Vander Werff, plus adjunct instructors for specialty areas including James Feuerstein, Lindsay Kurek, Trista Channels, Sarabeth Wojnowicz and Lisa Lamson.

Clinical Faculty:
Tammy Kordas, Kristen Kennedy

Au.D./Ph.D. Dual Degree

The Department of Communication Sciences and Disorders offers an Au.D./Ph.D. degree for those students interested in receiving both a professional doctoral degree (Au.D.) and a research doctoral degree (Ph.D.). The professional doctoral program is designed to meet the current requirements for the ASHA Certificate of Clinical Competence. The research doctoral degree (Ph.D.) is designed for students interested in a traditional Ph.D. program that focuses on research and prepares students for careers in teaching and research.

Students must be accepted and enrolled into the Au.D. program at Syracuse University prior to applying to the dual program (Au.D./Ph.D.). Application to the Au.D./Ph.D. program may only be made after successful completion of the first year of the Au.D. program.

Students who are interested in the Au.D./Ph.D. should contact a faculty member in their area of research interest. Sponsorship of the student by a faculty member must be agreed upon prior to the time of enrollment in the dual program. The Au.D./Ph.D. is a 110 credit program, which allows students to pursue both their clinical training and their research training in a rigorous, intensive and streamlined program. It is anticipated that a student can complete the dual degree program in a minimum of 6 years of full-time study.

In addition to fulfilling all the Au.D. program requirements, students completing the dual degree program will complete a guided research experience early in the program culminating in a submitted publication. Au.D./Ph.D. candidates must pass a pre-qualifying exam at the end of their first year in the dual program and qualifying exams at the end of their coursework. These academic and research experiences lead to the dissertation, which typically is begun in the fourth year of study.

Admission requirements:

All candidates for the dual degree must first be admitted to and complete the first year of the Au.D. program. Candidates for admission to the dual degree program should possess a bachelor’s degree with a GPA of 3.5 or higher on a 4.0 scale in the last 60 semester credits of their undergraduate degree. A minimum GPA of 3.5 in the candidate’s graduate coursework is also required. In addition, the candidate should have obtained a minimum percentile score of 40% in the Verbal section (raw score ≥ 149), 50% in the Quantitative section (raw score ≥ 153), and a 4.0 in the Writing section on the Graduate Record Examination taken within the last 5 years.

In order to be admitted to the Ph.D. portion of the program, a CSD faculty member must agree to initially mentor a student. Therefore, prospective students must discuss their research interests with a faculty member of their own choosing in order to determine if these interests could be met within the department.

Financial Support:

All applicants are considered for departmental graduate scholarships and assistantships during the admissions process.

Facilities:

The CSD academic department and Gebbie Speech Language Hearing Clinic are located at 621 Skytop Road on South Campus.

Degree Requirements:

The dual program has 110 graduate credits.

Audiology, PhD

Chair
Karen A. Doherty, Ph.D.
621 Skytop Road, Suite 1200
Students must discuss their research interests with an initial mentor. Therefore, prospective students must be clear about their research interests. In order to be admitted to the Ph.D. program, students must provide a statement indicating enthusiasm for pursuing research in the fields of Audiology or Speech Language Pathology. Acceptable TOEFL scores (105 Internet based) will also be required when submitting application materials. In addition, three strong letters of recommendation must also be submitted by applicants who are not native speakers of English. Three strong letters of recommendation should be obtained from members of their academic, professional, or community. These letters should provide information about the candidate's academic history, research experience, and future potential. If a candidate has a Masters Degree or AuD, the candidate should possess a bachelor's degree with a GPA above 3.5 in their graduate work. If a candidate has a Masters Degree or AuD, the candidate should possess a bachelor's degree with a GPA above 3.5. The distribution of coursework and dissertation credits will vary among students and will be based on evaluations by the student's Research Committee and the Graduate Committee. Students in the Ph.D. program must pass a two-part (oral and written) qualifying examination by the end of the fourth semester. A dissertation based on original research must be developed and successfully defended in accordance with the rules and regulations of the Graduate School. The maximum expected time in residence is five years.

Faculty
Karen Doherty, Beth Prieve, Kathy Vander Werff

Doctor of Philosophy in Audiology
The Ph.D. program in audiology consists of academic, research, and clinical experiences, with an emphasis on basic and applied science. Sponsorship of the Ph.D. student by a faculty member must be agreed upon prior to the time of enrollment. Interested students should contact the department to match with a faculty sponsor prior to applying.

Coursework for the Ph.D. degree in Audiology is individually designed. It may include courses within the Audiology/Communication Sciences and Disorders curriculum as well as a variety of courses in complementary areas such as psychology, engineering, computer science, statistics, sensory processes, neuroscience and gerontology. An additional specialty area of concentration may be obtained in some of these areas, such as in the Interdisciplinary Neuroscience Graduate Program as part of the Aging Studies Institute. Each student’s program of study will be uniquely tailored to their interest and research areas.

The Ph.D. degree requires a minimum of 83 credits beyond the bachelor's degree. Students begin their research experiences early in their programs and are mentored in faculty laboratories by completing a guided research experience in the first year, culminating in a submitted research paper. All Ph.D. candidates must pass a pre-qualifying exam at the end of their first year of full-time study and qualifying exams at the end of their coursework. These academic and research experiences lead to the dissertation, which is typically begun in the third year. The Ph.D. program is typically completed in 4-5 years of full-time study.

Admission Requirements:
Candidates for admission to the Ph.D. degree must possess a bachelor's degree with a GPA of 3.5 or higher on a 4.0 scale in the last 60 semester credits of their undergraduate degree. If a candidate has a Masters Degree or AuD, a minimum GPA of 3.5 in their graduate work is required. In addition, the candidate should obtain a minimum percentile score of 40% in the Verbal section, 50% in the Quantitative section, and a 4.0 in the Writing section on the Graduate Record Examination taken within the last 5 years. Acceptable TOEFL scores (105 Internet based) must also be submitted by applicants who are not native speakers of English. Three strong letters of recommendations and a personal statement indicating enthusiasm for pursuing research in the fields of Audiology or Speech Language Pathology will also be required when submitting application materials. In order to be admitted to the Ph.D. program, a CSD faculty member must agree to initially mentor a student. Therefore, prospective students must discuss their research interests with a faculty member of their own choosing in order to determine if these interests could be met within the department. The Ph.D. is a research degree and very little or no clinical training is offered. If a candidate is interested in obtaining such training, he or she should apply to the Doctor of Audiology program in the department.

Biological, PhD

Graduate Program Directors:
Jason Fridley, 315-443-3098
fridley@syr.edu
448 Life Sciences Complex
James Hewett, 315-443-9613
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350 Life Science Complex

Contact
Lynn Fall
Graduate Program Administrator
315-443-9154
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114 Life Sciences Complex

Faculty

The Department of Biology is committed to research-oriented graduate training of the highest quality. A wide variety of disciplines are offered within the areas of biochemistry, developmental biology, genetics, molecular and cellular biology, neurobiology, ecology, and evolution. Students may focus their graduate studies in Cell/Molecular Biology or in Ecology and Evolution, and some students may choose to address questions that span both of these major areas of research. Each student’s program is individually structured to provide the maximum flexibility in the choice of coursework consistent with high quality graduate scholarship.

The Department currently averages 40 full-time graduate students. About 75 percent of the students enroll directly following their undergraduate work; others come with a master’s degree earned elsewhere.

Program graduates are encouraged to pursue postdoctoral training at established laboratories prior to accepting professional appointments. Most recent graduates have found employment in university and colleges, many after completing postdoctoral work. Others have found posts in government, industry, hospital laboratories, and in private research institutes.

Admissions
Successful applicants generally have a minimum undergraduate average of B and high scores on the verbal, quantitative and analytical writing tests of the Graduate Record Examinations (GRE). Applicants must also have earned a B.S. or a B.A. degree and should have at least a minimal background in both physical and biological sciences, including the following: two years of biology, one year each of introductory chemistry, organic chemistry with laboratory, physics, and college level calculus. Although not required, a year of biochemistry is desirable for students interested in cell and molecular biology, and training in statistical analysis is desirable for all students.

Special consideration is given to students who have conducted undergraduate research and whose recommendations attest to their skills in the laboratory or field and promise in research. Applicants whose scholarly interests are confluent with those of our Graduate Faculty will also receive priority consideration.

Ph.D. in Biology

The Ph.D. program requires a minimum of 48 credits of coursework and dissertation taken at Syracuse University. Students entering the department with a B.A. or B.S. will complete a minimum of 24 hours of formal coursework. Students entering with a master's degree will complete at least 18 hours of formal coursework, at least 3/4 of which must be numbered at or above 600. The distribution of coursework and dissertation credits will vary among students and will be based on evaluations by the student’s Research Committee and the Graduate Committee. Students in the Ph.D. program must also pass a two-part (oral and written) qualifying examination by the end of the fourth semester. A dissertation based on original research must be developed and successfully defended in accordance with the rules and regulations of the Graduate School. The maximum expected time in residence is five years.

Graduate Awards
The current minimum level of support for the 2016-2017 academic year is $ 28,602. with additional summer support available, currently at the level of $ 25,500. Given Syracuse’s low cost of living, this is a comfortable income. Virtually all department graduate students are supported financially throughout their graduate career. Support typically comes in the form of a teaching assistantship and tuition scholarship during the academic year, with students able to conduct their research full-time during the summer. Students may also be supported by their faculty research advisor’s external grants or by Syracuse University Fellowships. Applying to local and national programs for graduate fellowships is strongly encouraged.
Research Facilities

Research facilities currently include AAALAC-accredited animal facilities, a research greenhouse, and local field experiment sites. Extensive facilities and instrumentation for carrying out modern biological research at the molecular, cellular, organismal, and population levels are available. Library holdings and computing facilities are readily accessible for student and faculty use. Our department is housed in the Life Sciences Complex, a 210,000-square-foot building with dedicated and outstanding research and teaching space for the life sciences.

Chemistry, PhD

Chair:
Timothy M. Korter
1-014 Center for Science and Technology
315-443-0269, tmkorter@syr.edu

Faculty


The Department of Chemistry is large enough to provide a broad range of graduate-level courses and research opportunities and yet small enough to foster close working relationships between students and professors. It includes 21 faculty, some 85 graduate students, 10 postdoctoral associates, and technical and secretarial staff. Programs of study include those for both M.S. and Ph.D. degrees, with research offerings in the areas of biochemistry, organic, inorganic, and physical chemistry, as well as those at the interface of these disciplines. During the first year of graduate study, courses enable students to gain a sound theoretical foundation for their own research investigations. Students are encouraged to become actively involved in research projects as soon as possible.

Ph.D. in Chemistry

All students in the department must satisfy course requirements that may vary depending on a candidate’s background and areas of specialization; typically, six three-credit graduate level courses prove sufficient. A minimum of 48 graduate credits, is required for a Ph.D. degree in chemistry. Students must pass three of four qualifying breadth examinations given in biochemistry, inorganic, organic, and physical chemistry and maintain a GPA of 3.0 to progress as Ph.D. candidates. Doctoral students must pass an oral examination in April of their second year in order to advance to candidacy. This exam tests the students’ understanding of their research problem, their familiarity with the relevant literature, and their competence with the appropriate background material and research tools. Candidates must submit a satisfactory dissertation and pass an oral examination on the dissertation and related topics.

Graduate Awards

The figures associated with various appointments are based on 2015 - 2016 awards.

Syracuse University Graduate Fellowships provide stipends of $24,310 (PhD) for nine months and tuition scholarships for a total of 30 credits for the academic year.

Graduate Teaching Assistantships, to support graduate study for students with superior qualifications, involve no more than 20 hours of teaching obligations per week during the academic year. They provide a stipend of $24,152 and a graduate tuition scholarship for 24 credits per year.

Summer Teaching Assistantships supporting undergraduate classes offered during the summer sessions, and Summer Research Fellowships-offered to graduate students making strong progress in their studies and research, provide stipends from $1,000 to $5,000.

Graduate Research Assistantships provide stipends over the academic year and summer from $19,000.

Facilities

The Center for Science and Technology near the main quadrangle of the Syracuse University campus provides space and facilities for chemistry faculty and graduate student research: glassblowing and electronic shops; millions of dollars of specialized equipment, including spectrometers, lasers, and other chemical instrumentation; computers and high-speed networks; and an automated X-ray diffractometer for structure determinations.

The Life Sciences Complex, located adjacent to the department of chemistry, provides research and teaching space for the departments of chemistry and biology, and helps foster interactions between the two departments. This building opened in fall 2008.

Clinical Psychology, PhD

Contact:
Kevin Antshel, Ph.D.
430 Huntington Hall
kmantshel@syr.edu
(315) 443-9450

Financial Assistance

The department makes a determined effort to offer each student financial support from several sources: graduate scholarships, teaching assistantships, research assistantships, clinical assistantships, and fellowships.

Program Requirements

The Ph.D. requires at least 90 credits, including a 6-credit master’s thesis and an 18-credit dissertation. Students must attend the University on a full-time basis and remain in residence until the 90 credits are completed. The required clinical curriculum includes coursework in clinical research methods, psychopathology (child and adult), assessment, and psychotherapy, along with supervised clinical practica. The APA-required core curriculum also includes courses in the following areas: statistics and design, cognitive-affective, social, individual differences, biological, historical and systems, professional ethics, and issues of cultural and ethnic diversity. The clinical curriculum includes 9 credits of electives. Students must pass a Ph.D. qualifying exam that includes a critical review of a substantive area in clinical psychology that is evaluated by members of the core clinical faculty. A full-time, one-year, APA-accredited internship is also required before the Ph.D. is awarded; this is usually completed in the fifth or
Psychological Services Center
The clinical psychology program is associated with the SU Psychological Services Center, which is a service delivery, training, and research facility that serves SU students and members of the Syracuse community. Services are provided to children, adolescents, and adults. The Psychological Services Center is staffed by a director, clinic secretary, and graduate students in clinical psychology and related fields. Supervision is provided by full-time clinical faculty and part-time adjunct faculty drawn from local hospitals and clinics. Supervisors vary in their conceptual approach to understanding and modifying behavior. A broad array of clinical services are offered, including individual, marital, family, and group therapy, as well as psychological evaluations and testing.

College Science Teaching, PhD
Chair
Sharon Dotger
101 Heroy Geology Lab
443-2586

Faculty
Sharon Dotger, John W. Tillotson, Jason R. Wiles

The graduate programs in the Department of Science Teaching focus on contemporary theories, research paradigms, and instructional practices that advance the knowledge of science education through specialized preparation. The programs draw on the multiple resources of the University to prepare leaders in science education, ranging from the classroom teacher to the research specialist.

Ph.D. in College Science Teaching
This program is for those who plan to teach undergraduate courses in the natural sciences in a junior college, liberal arts college, or university setting. The program leads to a Ph.D. in college science teaching and offers:

- broad training concentrated in the natural sciences or engineering;
- a combination of breadth, specialization, and integration in the sciences or engineering;
- supervised college teaching experience in the candidate’s science specialty, either at Syracuse University or at another college in the Syracuse vicinity;
- seminars in curriculum development and methods of teaching science in higher education; and

- research focused on the teaching and learning of science in the undergraduate environment.

Representatives from the Department of Science Teaching and the natural sciences comprise the doctoral committee which guides the student's graduate program. An advisor is selected during the first year of study in consultation with the program faculty.

Admission
Applicants must meet the requirements for admission to the Graduate School and must hold a bachelor's degree in a science or engineering field or in science education. Typically, students have earned a master's degree in a science or engineering field prior to admission to the doctoral program.

Program Requirements
The degree requires a total of 90 credits, of which a minimum of 9 must be for the dissertation. At least 54 credits of graduate courses in science and science education beyond the bachelor's degree are also required. Programs are planned individually so that each student specializes and develops teaching and research competence in one or more fields.

The following courses, which constitute a foundation area, are also required:

- SCE 614 - The Nature of Science in Science Education 3 credit(s)
- SCI 544 - Teaching of College Science 3 credit(s)

Higher Education
Research Tools Requirement
A research tools requirement must be satisfied by successfully completing a prescribed core of courses in research methods (12-15 credits). Students are admitted to doctoral candidacy only after successfully completing the following:

- the research tools requirement;
- the foundation area of 9 credits; and
- written and oral qualifying examinations.

Additional Information
The dissertation must focus on research addressing teaching and/or learning science in the undergraduate or graduate environment.

Composition and Cultural Rhetoric, PhD
Contact
Eileen E. Schell
239 H.B. Crouse Hall
315-443-5146

Degree Requirements
To earn the Ph.D., a student must complete a minimum of 45 credits beyond the master's degree (counted as 30 credits), for a total of 75 required credits. Of these, 36 credits are in required and elective courses. The program is
designated to be completed in 4 years. Required credits are distributed as follows:

Students who enter with a master's degree in rhetoric and composition or have satisfactorily completed graduate courses in appropriate areas of study at Syracuse University or at other institutions may apply up to 12 previously earned credits to course requirements, based on a careful evaluation of their transcripts.

All students complete all required coursework and pass the qualifying exams. (See ccr.syr.edu.) Students must complete a written dissertation that is a book-length work of scholarship and defend it viva voce.

Core Courses: 18 Credits Required

- CCR 611 - Composition Histories/Theories 3 credit(s)
- CCR 631 - Contemporary Rhetorics 3 credit(s)
- CCR 632 - Studies in Writing Pedagogy 3 credit(s)
- CCR 633 - Writing, Rhetorics and Technologies 3 credit(s)
- CCR 634 - Ancient Rhetorics 3 credit(s)
- CCR 635 - Advanced Research Practices 3 credit(s)

Electives: 18 Credits Required

A minimum of 9 credits must be in Composition and Cultural Rhetoric

- CCR 636 - Feminist Rhetoric(s) 3 credit(s)
- CCR 638 - Advanced Creative Nonfiction 3 credit(s)
- CCR 651 - Language and Literacy 3 credit(s)
- CCR 711 - Advanced Theories and Philosophies of Rhetoric 3 credit(s)
- CCR 712 - Advanced Theories and Philosophies of Composition 3 credit(s)
- CCR 732 - Advanced Studies in Writing Curriculum and Pedagogy 3 credit(s)
- CCR 733 - Rhetoric, Composition, and the Digital Humanities 3 credit(s)
- CCR 744 - African American Rhetorics 3 credit(s)
- CCR 745 - Writing Program Administration 3 credit(s)
- CCR 746 - Queer Rhetorics 3 credit(s)
- CCR 747 - Authorship Studies 3 credit(s)
- CCR 751 - Social History of Rhetoric 3 credit(s)
- CCR 760 - Advanced Studies in Composition & Cultural Rhetoric: Selected Topics 3 credit(s)

3 credits in doctoral readings

(in preparation for qualifying examinations)

6-18 credits of dissertation

Graduate Awards

Students are eligible to apply for the following awards (figures for graduate appointments represent 2011-2012 stipends). It is anticipated that all recipients who remain in good standing will continue to receive some form of financial support for up to four years of graduate study.

Graduate Teaching Assistantships:

Offered to approximately four new students each year; nine months; no more than an average of 20 hours of work per week; includes a stipend of $17,338.00, tuition scholarship for 12 credits for the fall and spring semester, and 6 credits in the summer. Teaching assistants, appointed by the Writing Program, have full responsibility for 3 sections of writing instruction a year, are expected to attend regular staff meetings and professional development workshops. There is also an ongoing mentorship review of each teaching assistant's performance as a teacher.

Summer Teaching:

One section offered to some graduate students based on teaching record and availability.

Additional Information

For further details, contact the director or graduate coordinator, or visit the Composition and Cultural Rhetoric web site, ccr.syr.edu.

Earth Sciences, PhD

Donald Siegel, Chair
204 Heroy Geology Laboratory,
315-443-2872

Faculty

Suzanne L. Baldwin, Marion E. Bickford, Paul G. Fitzgerald, Gregory D. Hoke, Linda C. Ivany, Christopher Junium, Jeffrey A. Karson, Laura K. Lautz, Zuni Li, Robert Moucha, Cathryn R. Newton, Scott D. Samson, Christopher A. Scholz, Donald I. Siegel, Bruce H. Wilkinson

Graduate study in the Department of Earth Sciences offers students opportunities for field-based geological and geophysical research worldwide. Ongoing research in the Department is focused primarily in the areas of environmental geology/global change and tectonics/crustal evolution-two of the most rapidly developing areas of the earth sciences. The Department is housed in the William B. Heroy Geology Laboratory, which contains state-of-the-art analytical and computing facilities, modern well-equipped teaching spaces, and a dedicated Earth Sciences library. All of the faculty are engaged in research and teaching.

The Department typically has a combination of students pursuing either the M.S. or Ph.D. degree.

Several of our faculty-led research projects are large collaborative, multi-institutional, multi-national programs that afford our graduate students opportunities to work in diverse parts of the world with teams of internationally recognized scholars. Department faculty and graduate students are currently pursuing field studies worldwide.

Admission

Incoming students are expected to have two semesters of the following courses: calculus, chemistry, and physics or biology. In addition, incoming students need at least three distribution courses in the Earth Sciences, such as paleobiology, sedimentology, mineralogy, structural geology, tectonics, geochemistry, geophysics, climatology, paleoceanography, paleoclimatology, marine geology, and/or hydrogeology. Students are strongly encouraged to have participated in an approved summer field course or comparable field experience. Substitutions may be granted upon petition of the Department.

Degree Programs

The Department offers programs of graduate study leading to the M.A., M.S., and Ph.D. Minimum requirements for each degree are an average GPA of 3.0 in major subjects and an overall average of 2.8.

Students who wish to continue graduate study toward a Ph.D. in Earth Sciences following a master's degree must submit a Syracuse University Graduate School application form, including letters of reference, to the Department.

Ph.D. in Earth Sciences

72 total graduate credit hours are required.

Ph.D. students coming to the program with a M.S. may receive credit for up to 30 hours. An additional 42 credit hours are required. At least 12 of those 42 credit hours must be in graduate coursework, with the balance made up by dissertation credits.

Ph.D. students coming to the program without a M.S. must take at least 36 credits in graduate course work (the equivalent of 24 M.S. course work credits plus 12 Ph.D. course work credits). The balance of the 72 credits will be made up in dissertation credits.

Most students can satisfy the requirements within four years after completing the master's degree. The Ph.D. candidate must pass an oral qualifying examination and must give an oral defense of the dissertation.

Graduate Awards

Graduate students are expected to pursue their studies energetically and to complete their advanced degree work without undue delay. Financial support typically will be given to a student for four semesters at the master's level or eight semesters in the Ph.D. program.
Graduate Scholarships Awarded to students with superior qualifications, provide, in most cases, full tuition for academic year.

Graduate Teaching Assistantships:
Offered to some Graduate Scholarship recipients; no more than an average of 20 hours of work per week; 8.5 months; stipend in addition to tuition scholarship for up to 24 credits per year as needed.

Graduate Research Assistantships:
Offered to some Graduate Scholarship recipients; no more than an average of 20 hours per week; 8.5 to 12 months; stipends variable in addition to tuition scholarship for up to 24 credits per year as needed.

Syracuse University Graduate Fellowships:
Stipend for 8.5 months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 for the academic year.

Department Research Support:
The Department has various funds available to support graduate student travel and research.

Facilities
The Heroy Geology Laboratory provides well-equipped laboratories and student study research offices. The Department houses state-of-the-art workstation-based seismic data processing, GIS, and image-processing facilities; first-class laboratories for U/Pb geochronology, 40Ar/39Ar thermochronology, light stable isotope geochemistry, (U-Th)/He dating, and fission track thermochronology. The Department also has a range of sample preparation facilities, clean labs, two electronmicroscopes for imaging and elemental analysis, a direct current plasmaspectrometer, ion-chromatograph and an array of field geophysical gear. A 16-unit Windows- and Macintosh-based computer cluster is available to all Department members. The Department also houses a dedicated 28,844 volume research library.

The University’s location is central to diverse geologic terrain including the classic Paleozoic sedimentary rocks of the Appalachian plateau, the complex structures and metamorphic rocks of the Adirondack Mountains, the Canadian Shield, and Quaternary sequences in the Finger Lakes. The scope of departmental research is international.

Contact:
Dorri Beam, Director of Graduate Studies, 401 Hall of Languages, 315-443-2174;

Faculty
Crystal Bartolovich, Dorri Beam, Michael Burkard, Dymphna Callaghan, Manan Desai, 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, Kevin Morrison, Donald E. Morton, Patricia Roylance, George Saunders, Stephanie Shirilfan, Bruce Smith, Dana Spriotta, Harvey Teres, Silvio Torres-Saillant, Meina Yates-Richard, Christopher Eng

The Department of English offers a range of graduate programs: the M.A. in English, the M.F.A. in Creative Writing, and the Ph.D. in English. The department welcomes students who plan to become writers and scholar/teachers, and it makes a serious effort to tailor its programs to each student’s interests. Classes are small, usually from 5 to 15 students, and there is ample opportunity for independent study and supervised research.

One of the department’s greatest strengths is its faculty, which includes distinguished scholar-teachers and internationally known writers.

The graduate programs in English ask students to attain some coverage of literary periods, genres, and major authors, while also devoting substantial attention to those modes of theoretical inquiry that have disrupted and enlivened the study of literature in recent years. To that end our current course offerings represent both traditional approaches to English and important work in contemporary theory and cultural studies.

For more information about our graduate programs, degree and program requirements, course offerings, and specific application deadline dates, visit our department web site at http://english.syr.edu/

Ph.D. in English
The doctoral program is intended for the most promising students entering with a B.A. or M.A., who all receive five years of support. This is a research degree, aimed primarily at those expecting to teach on the college level. The department has particular strengths in early modern literature, 18th and 19th-century British studies, American studies, and film, but includes other areas as well. Small proseminars and advanced seminars, designed to develop both breadth and depth of knowledge, offer students intensive intellectual engagement with members of the faculty. The faculty all share a strong interest in literary history and forms, critical theory, and cultural studies. About four students are admitted each year. Applicants should use the intellectual statement on the application for graduate study to describe, as fully and specifically as possible, the intellectual projects they wish to pursue.

Requirements:
The formal requirements are 36 credit hours of coursework in English beyond the M.A. (54 credit hours of coursework for those entering with a B.A.); demonstrated competence in teaching; proficiency in a foreign language; a field exam of two parts: (a) a written test, and (b) a critical essay of 20-30 pages (students entering the program may, at the discretion of the Graduate Committee, have a part of the field examination requirement waived; this will be determined on a case-by-case basis.); a three-hour oral Ph.D. examination on two fields, to be taken after the third year of coursework, typically in the fall of the seventh semester (the first exam area will focus on the literary, critical, and/or cinematic/media texts of a major period, while the second exam area may focus on a particular topic, genre, or mode of inquiry); the prospectus of 10-20 pages and defense of an 18- to 30-credit dissertation.

Courses:
ENG 631 - Critical Theory is a required part of students’ coursework credit. Other courses are chosen from proseminaries (ENG 630) and seminars (ENG 730). To fulfill the graduate proseminar requirement, students will need to take at least one proseminar in British Studies and one proseminar in American Studies. During the first two years of coursework, students will be required to take at least three graduate proseminars and three graduate seminars, in addition to other electives that will comprise the minimum number of cumulative hours.

A Ph.D. student may take up to two courses outside of the English Department. In special cases, the student may petition the Graduate Committee to have courses from other departments, or independent studies in English count as part of the coursework credit required for the degree. The Graduate Committee will grant such petitions if the student demonstrates how these courses form an integral part of his or her study in English.

For a fuller description of course offerings, write to the graduate studies coordinator, or submit your request online at our web site: http://english.syr.edu/

Graduate Awards
Teaching assistantships, include tuition scholarships for nine credits per semester (plus six credits in the summer) as well as stipends from $14,826 to $15,789. New teaching assistants at the M.A. level are assigned to courses offered by the Writing Program. Teaching assistants have full responsibility for three sections a year, are expected to attend regular staff meetings and workshops, and participate in a coordinating group. There is also an ongoing mentorship and review of each teaching assistant’s performance as a teacher. New teaching assistants take a teaching practicum (CCR 632 ) closely related to their classroom duties.

Beginning Ph.D. students serve as teaching assistants in undergraduate lecture courses taught by full-time faculty in the English
in psychological science. Required milestones include completion of a first year research project, Master's proposal and defense, qualifying exam, and Dissertation proposal and defense.

Program Requirements
The curriculum is designed to provide students with the essential coursework and laboratory research experience necessary for an academic or research career. The program of study for the Ph.D. in Experimental Psychology requires a minimum of 90 graduate credit hours, distributed as follows:

Statistics Core (6 credits):
- PSY 655 - Experimental Design and Statistical Methods I 3 credit(s)
- PSY 756 - Experimental Design and Statistical Methods II 3 credit(s)

Department Core (9 credits):
Three courses chosen from areas outside of the student's major area of study.

Methods Core (15 Credits):
- PSY 611 - Proseminar Methods and Topics in Cognitive Psychology 3 credit(s)
- PSY 612 - Advanced Experimental Psychology 3 credit(s)
- PSY 854 - Bayesian Statistical Analysis 3 credit(s)

Cognitive/Neural Bases (9 credits):
- PSY 615 - Behavioral Pharmacology 3 credit(s)
- PSY 622 - Cognitive Psychology: Memory and Attention 3 credit(s)
- PSY 626 - Cognitive Neurochemistry 3 credit(s)
- PSY 730 - Seminar in Experimental Psychology 3 credit(s)
- PSY 737 - Experimental Psychology: Cognition and Human Aging 3 credit(s)
- PSY 777 - Advanced Cognitive Neuroscience 3 credit(s)

Applications of Experimental Psychology (3 credits):
- PSY 736 - Advanced Introduction to Cognitive Psychology 3 credit(s)

Independent Research, Other Recommended Courses (24 credits):
Students are encouraged to work closely with one or more faculty members in a research program, and to develop a program of research.

College of Arts and Sciences

Department for two to three years. They receive ongoing mentorship and faculty review of their performance.

Advanced Ph.D. students teach independent courses of their own design in the English department for one or two years, and participate in the Future Professorate Project. This project offers mentored teaching and participation in teaching seminars every semester. Students who fulfill all the requirements receive at graduation a certificate in university teaching.

One Ph.D. University Fellowship is awarded to a new applicant of exceptional quality and determined by the Graduate committee and the department also competes for other various fellowships such as African Americna Fellowships, Ronald E. McNair Fellowships. All fellowships include tuition scholarships for full-time study as well as stipends from $14,826 to $24,795.

Experimental Psychology, PhD
Cognition, Brain, & Behavior

Contact:
Amy Criss, Ph.D.
477 Huntington Hall
acris@syr.edu
(315)443-3687

Faculty

The Cognition, Brain, & Behavior (C.B.B.) program offers graduate training leading to a Ph.D. in Experimental Psychology. Research in the area is centered on using rigorous methods and theory to understand fundamental mechanisms underlying cognitive and neural processing. Research on cognitive and perceptual processes, such as visual perception, memory, attention, knowledge development, concepts and categories, problem solving, and decision making, contributes to our understanding of human behavior in individual and social environments and provides the structure on which to build applications to improve health and behavior.

Students receive research training at the forefront of Psychology. Students are assigned a primary advisor upon entry to the program and are required to actively participate in program of research supervised by a core faculty member through the duration of their program of study. Participation in these groups is designed to facilitate the development of research skills and professional development necessary for a career in cognitive and neural processing. Research on cognitive and neural processing. Research on cognitive and neural processing.

Experimental Psychology
Cognition, Brain, & Behavior

Contact:
Amy Criss, Ph.D.
477 Huntington Hall
acris@syr.edu
(315)443-3687

Faculty

The Cognition, Brain, & Behavior (C.B.B.) program offers graduate training leading to a Ph.D. in Experimental Psychology. Research in the area is centered on using rigorous methods and theory to understand fundamental mechanisms underlying cognitive and neural processing. Research on cognitive and perceptual processes, such as visual perception, memory, attention, knowledge development, concepts and categories, problem solving, and decision making, contributes to our understanding of human behavior in individual and social environments and provides the structure on which to build applications to improve health and behavior.

Students receive research training at the forefront of Psychology. Students are assigned a primary advisor upon entry to the program and are required to actively participate in program of research supervised by a core faculty member through the duration of their program of study. Participation in these groups is designed to facilitate the development of research skills and professional development necessary for a career in psychological science. Required milestones include completion of a first year research project, Master's proposal and defense, qualifying exam, and Dissertation proposal and defense.

Program Requirements
The curriculum is designed to provide students with the essential coursework and laboratory research experience necessary for an academic or research career. The program of study for the Ph.D. in Experimental Psychology requires a minimum of 90 graduate credit hours, distributed as follows:

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Department Core (9 credits):
Three courses chosen from areas outside of the student's major area of study.

Methods Core (15 Credits):
- PSY 611 - Proseminar Methods and Topics in Cognitive Psychology 3 credit(s)
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Applications of Experimental Psychology (3 credits):
- PSY 736 - Advanced Introduction to Cognitive Psychology 3 credit(s)

Independent Research, Other Recommended Courses (24 credits):
Students are encouraged to work closely with one or more faculty members in a research program, and to develop a program of research.

Master's Thesis (6 credits)
Dissertation (18 credits)

Satisfactory Progress in the Program
Students are required to propose their master's thesis by September 30th of their second year, and to propose their doctoral dissertation by September 30th of their fourth year. Students having completed a research master's thesis elsewhere may not be required to do another thesis, but must undertake and complete a research project in their first year of study at Syracuse. Students must complete the master's thesis (or equivalent research project for students admitted with an earned master's degree) by May 30th of their second year. Students take a Ph.D. qualifying exam by May 30th of their third year with the Ph.D. dissertation proposal. Thesis and dissertation research is supervised by a committee consisting of three faculty members. The dissertation committee consists of the student's research advisor, who must be a member of the Cognition, Brain, and Behavior (C.B.B.) program, and two other faculty members. Students are expected to defend the dissertation by the end of their fifth year.

Admissions and Financial Support
Admission to the graduate program in Cognition, Brain, and Behavior (C.B.B.) depends on the quality of the applicant's prior academic record, the applicant's career plans and research interests, and the applicant's GRE scores. Financial support is available for all well-qualified graduate students by means of research assistantships, teaching assistantships, or fellowships.

Mathematics, PhD
Chair

Faculty

The Department of Mathematics has 32 faculty members, with research interests in several areas of mathematics, statistics, and mathematics education, and approximately 55 graduate students.

Recommended Courses (24 credits):

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<tr>
<th>Course Code</th>
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<tr>
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<td>Advanced Introduction to Cognitive Psychology</td>
</tr>
</tbody>
</table>

Applications of Experimental Psychology (3 credits):
- PSY 736 - Advanced Introduction to Cognitive Psychology 3 credit(s)

Independent Research, Other Recommended Courses (24 credits):
Students are encouraged to work closely with one or more faculty members in a research program, and to develop a program of research.
students. The department is housed in the recently renovated Carnegie Library building on the main campus quadrangle. Programs of study include those for M.S. and Ph.D. degrees in Mathematics, with or without a concentration in Statistics, and for M.S. and Ph.D. degrees in Mathematics Education.

Ph.D. in Mathematics

Doctoral students are expected to have completed the requirements for a master's degree in mathematics or the equivalent. They then take at least 60 credits of additional work including up to 30 credits of dissertation credit and at least 30 credits of coursework. All students must demonstrate a mastery of English. Students must pass preliminary examinations in analysis and algebra and qualifying examinations in a major area and a minor area chosen (subject to some restrictions), from algebra, analysis, combinatorics, numerical analysis, statistics, and topology. Students who successfully complete the qualifying examination are granted the Master's of Philosophy (M.Phil.) degree in mathematics. Each Ph.D. student must defend in oral examination a dissertation that demonstrates ability to carry out independent investigation which makes an original contribution to mathematics. Mathematics students may write a Ph.D. dissertation under certain faculty members in computer science. Further information is available from Mark Kleiner, 215 Carnegie Building, or on our web site: math.syr.edu.

Research Areas

The department's Colloquium series features weekly lectures by mathematicians from all over the United States and abroad in many of the areas of mathematical research represented in the department. Furthermore several of the research groups organize regular research seminars. Colloquia and seminar schedules, along with other information about our programs, courses, and events, can be found at math.syr.edu.

The following research groups are currently represented in the department.

Algebra

Algebraic geometry (moduli spaces of curves, equations defining finite sets of points), commutative algebra (homological algebra, Cohen-Macaulay modules, characteristic p), non-commutative algebra (representations of finite-dimensional algebras, homological algebra, group actions on non-commutative rings, Hopf algebras, enveloping algebras, non-commutative algebraic geometry), Faculty: Diaz, Kleiner, Leuschke, Miller, Quinn, Zacharia.

Analysis

Complex analysis (several complex variables, pluripotential theory, complex dynamics, invariant metrics, holomorphic currents, Kähler geometry, rigidity problems), geometric analysis (PDE on manifolds, geometric flows), harmonic analysis, partial differential equations (linear and nonlinear elliptic PDE, boundary value problems on nonsmooth domains), geometric function theory (quasiconformal mappings, analysis on metric spaces). Faculty: Coman, Iwaniec, Kovaliev, Lanzani, Onninen, Polotsky, Verchota, Vogel, Wylie, Yuan.

Applied Mathematics


Combinatorics

Combinatorics, graph theory, rigidity theory, symmetries of planar graphs, automorphism groups of graphs. Faculty: Graver.

Geometry/Topology

Low-dimensional topology and knot theory (knot concordance, Heegaard Floer homology, homology theories for knots and links), K-theory (topological K-theory of Eilenberg-Mac Lane spaces, equivariant homotopy theory), Riemannian/ Kähler geometry (Ricci curvature and topology, special metrics, geometric flows, rigidity problems). Faculty: Ucci, Wehrli, Wylie, Yuan.

Mathematics Education


Probability

Interacting particle systems, Brownian motion, random walks, probabilistic methods in mathematical finance, martingales. Faculty: Cox, Griffin, McConnell.

Statistics

Ranking and selection theory (applications in radar signal processing and two-stage procedures for multinomial problems), change-point problems, sequential analysis, longitudinal analysis, neural networks. Faculty: Chen, Kim, Volterman.

Graduate Awards

Figures for graduate appointments represent 2016-2017 stipends.

Graduate Scholarships:

Support graduate study for students with superior qualifications; provide, in most cases, full tuition for the academic year.

Graduate Assistantships:

Offered to most Graduate Scholarship recipients; no more than an average of 15 hours of work per week; nine months; stipend ranging from $17,589 to $21,494 in addition to tuition scholarship for 24 credits per year. Additional summer support is generally available.

Syracuse University Graduate Fellowships:

Tax-free stipends are $24,795 for nine months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 credits during the academic year.

Facilities

The mathematics collection is held within the Carnegie Library and currently includes over 34,000 books. Many of the resources are online and include MathSciNet, Current Index to Statistics, Jahrbuch Database, MathEduc, ERIC, Scopus, and Web of Science, and over 350 mathematics journal subscriptions.

In addition to covering a broad range of pure and applied mathematics, the collection contains print and electronic resources in the history of mathematics, mathematics education, and statistics. The following resources are available for student borrowing from the Carnegie Library service desk: TI graphing calculators, geometry kits, and course reserve books.

The computer lab in Carnegie Library, Room 208, has 16 computers, and a color printer with copying and scanning capability. The lab computers provide extensive software for statistical or data analysis, data base management, programming, and graphics. More information on computing services and the software available for students may be found on the ITS website: https://its.syr.edu/computer-labs/index.html.

The Carnegie Library contains over 210,000 volumes in the sciences, including biology, chemistry, engineering and computer science, library and information science, nutrition science and dietetics, public health, physics & astronomy, photography, technical arts, pure and applied mathematics, probability and statistics, mathematics education, and military and naval sciences. The historic Reading Room provides a quiet place for students to study and use library resources.

Philosophy, PhD

Contact

Director of Graduate 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 Heiler, Kris McDaniel, Hille Paakkunainen, Kara Richardson,
Michael Rieppel, Nathaniel Sharadin, David Sobel, Laurence Thomas, Robert Van Gulick

The graduate program in philosophy offers study in the core areas of Anglo-American philosophy. It also offers work on the thought of some of the major figures of the history of philosophy, e.g., Plato, Aristotle, Hume, Leibniz, Spinoza, Descartes, and Kant. The department believes that each student's education should include some study of the history of philosophy whether or not the student's interests are primarily historical. The program is designed to prepare students both to teach philosophy and to contribute to the advance of philosophical inquiry.

There are generally 40 full-time philosophy graduate students in residence at Syracuse. Most full-time students in the Ph.D. program are awarded financial assistance in the form of a teaching assistantship, a fellowship, or a tuition scholarship.

Ph.D. in Philosophy

A total of 63 credits of graduate work are required for the Ph.D. in Philosophy. Of these, 18 credits must be devoted to a doctoral dissertation which is a book-length work of scholarly research and 45 credits (15 3-credit courses) must be devoted to coursework, as specified below. For students entering with prior graduate work, no more than six credits of coursework may be transferred at the discretion of the Director of Graduate Studies.

Required proseminars: The following three writing-intensive proseminars must be taken in the first three semesters. There will be a minimum grade requirement of B; students may retake a course at most once; incompletes will be awarded only in the event of a genuine emergency. One proseminar may be waived at the discretion of the Director of Graduate Studies based on prior graduate work.

Each proseminar will focus on at least two major philosophical problems and will require students to read at least three major philosophers. Each proseminar will require several (5-6) short papers, and one longer paper which is revised by the student at least once following peer- and faculty-review.

- PHI 617 - Proseminar: History of Philosophy 3 credit(s)
- PHI 693 - Proseminar: Moral and Political Philosophy 3 credit(s)
- PHI 687 - Proseminar: Language, Epistemology, Mind and Metaphysics 3 credit(s)

Additional Information

A full description of the Ph.D. requirements can be found on the departmental web site.

Programs in Philosophy and Law

The Philosophy Department joins with the College of Law in offering an opportunity to pursue the J.D./M.A. Philosophy or the J.D./Ph.D. Philosophy degrees at the same time. See the departmental web site at http://philosophy.syr.edu/GradStudiesinfo.htm for a more detailed description of these programs.

Physics, PhD

Chair

A. Alan Middleton
201 Physics Building,
315-443-3901.

Faculty

Cristian Armendáriz-Picon, Marina Artuso, Stefan Ballmer, Steven Blusk, Mark Bowick, Duncan Brown, Simon Catterall, Jili Fan, Martin B. Forster, Kenneth Foster, Jay Hubisz, Matthew LaHaye, John Laiho, Edward D. Lipson, M. Lisa Manning, M. Cristina Marchetti, Alan Middleton, Liviu Movileanu, Britton Flourene, Carl Rosenzweig, Peter Saulson, Eric A. Schiff, Jennifer Schwarz, Tomasz Skwarnicki, Mitchell Soderberg, Paul Souder, Sheldon Stone, Gianfranco Vidal, Scott Watson

The Department of Physics has 31 faculty members, 21 postdoctoral research associates, and about 71 graduate students. The department is housed in the modern, six-floor physics building overlooking the University's main quadrangle. Facilities include state-of-the-art laboratory space, high-performance computing resources, and a machine shop, in addition to numerous specialized research facilities maintained by the research groups described below.

The department runs a weekly colloquium series that brings scientists from the United States and abroad to the University to present research and exchange ideas. There are also several research seminar series run by the different research groups. Colloquia and seminar schedules (along with other information about our program, courses, and events) can be found on the Internet at physics.syr.edu.

Degree Programs

All entering students must take a comprehensive examination. Those who perform unsatisfactorily may be required to take and pass remedial courses. However, any associated offer of financial support is not contingent upon passing this examination.

Ph.D. in Physics

The Ph.D. degree is awarded to students who complete a minimum of 48 credits of graduate-level coursework, pass a two-part qualifying examination, pass a research oral examination on the student's proposed research, complete a written thesis based upon original research, and pass a thesis defense examination. The coursework includes completion of seven required courses:

- PHY 581 - Methods of Theoretical Physics I 3 credit(s)
- PHY 614 - Graduate Laboratory 3 credit(s)
- PHY 651 - Instrumentation in Modern Physics

Approved Courses

Plus three approved courses. These may be advanced physics courses or other courses associated with the student's degree program. PHY 663 will not count as one of the three approved courses.

Additional Information

The student forms a committee of four faculty members who conduct a research oral examination based on the student's proposed research. Students must maintain a B average.

Research Areas

The department has several strong research groups from which former students and post-doctoral associates have gone on to distinguished careers at universities and in industry. Graduate work in physics presently encompasses the fields described below.

Theoretical

Condensed Matter

Research in this area includes ongoing studies of soft matter systems, dynamical systems, granular materials, and disordered matter. Faculty study the mechanics of mesoscopic structured materials and biological tissues. The dynamics of active matter, including reconstituted biological systems and living cells and flocks, is an active area of study. The glassy dynamical behavior and statistical physics of materials with disorder is studied, using connections with advanced algorithms to model complex systems. Flow and plastic deformation in jammed and glassy solids (as in metallic glasses, foams and granular materials) are the object of research work. Bowick, Manning, Marchetti, Middleton, Schwarz. Three postdoctoral fellows.

Elementary Particles and Fields Quantum field theory and quantum gravity. Supersymmetry and its application to quantum gravity and models of Beyond Standard Model Physics. Strongly coupled dynamics via effective field theory and lattice field theory. LHC phenomenology and lattice QCD. Inflation, the generation of density perturbations, the origin of dark matter and dark energy, baryogenesis and the cosmic microwave background radiation. Particle cosmology. Armendáriz-Picon, Catterall, Fan, Hubisz, Laiho, Watson. Two postdoctoral fellows.
Computational Physics
Numerical studies of random surfaces, liquid membranes; study of quantum gravity as a theory of dynamically triangulated meshes; analysis of phase transitions and phase structure in disordered systems; gravitational waveforms from coalescences of astrophysical binary systems; gravitational wave data analysis; numerical simulations on parallel computers; connections between algorithms and physical principles; lattice quantum chromodynamics. Application of distributed processing to large scale quantum theory problems. Bowick, Brown, Catterall, Couvares, Fisher, Laiho, Marchetti, Middleton. One postdoctoral fellow.

Experimental
Astrophysics of the Interstellar Medium and Planetary Atmospheres
Laboratory studies of physical and chemical processes occurring in the interstellar medium and in planetary atmospheres, including formation of molecular hydrogen and hydrogenation and oxidation reactions on interstellar and/or planetary dust grain analogues. Vidali.

Biological and Medical Physics
Experimental studies of photosensory transduction in single-celled model microorganisms, using nonlinear systems physiology approaches; bioinformatics; phylogenetics and molecular clocks; technology development for telemedicine and human-computer interfacing; image processing in nuclear medicine and magnetic resonance imaging. Forstner, Foster, Krol, Lipson, Movileanu, Saranak.

High Energy Experimental Particle Physics
Experimental studies of the fundamental Electroweak and Strong interactions as manifested by the decays of beauty and charm quarks and production of other “exotic” phenomena. These studies are mostly preformed as part of the LHCb experiment at the Large Hadron Collider located at CERN in Geneva, Switzerland. We are primarily interested in how new physics phenomena manifests itself in CP violating and rare B meson decays. We also perform R&D leading to advanced silicon micro-pattern detectors, such as pixel and microstrip strip sensors, and their related readout electronics. The group is also active in neutrino flavor oscillation research, using neutrino beams created at Fermilab in Chicago, Illinois. Our neutrino program involves R&D on the development of liquid argon neutrino detectors, as proposed for use in the MicroBooNE and LBNE experiments. Members of the group have discovered several new particles, including the B, Ds, Y(1D) and made the first measurements of several very important decay modes of these objects. Artuso, Blusk, Mountain, Skwarnicki, Soderberg, Stone and Wang. Four postdoctoral fellows.

Intermediate Energy Particle Physics
Use of spin degrees of freedom to study quantum chromodynamics and the Standard Model at low energies. Experiments are underway at Stanford Linear Accelerator Center (SLAC) and at Thomas Jefferson National Accelerator Facility (JLAB). Holmes, Souder. 1 postdoctoral fellow

Gravitational-wave Astronomy and Astrophysics

Semiconductors, Thin Films, and Solar Cells

Quantum mechanics and nanoscale devices

Dark Matter
Development of improved ultra-low-radioactivity detectors and environments including detectors of Weakly Interacting Massive Particles, analysis of data from dark matter searches. Member of the Cryogenic Dark Matter Search and DEAP/CLEAN collaborations. Schnee. One postdoctoral fellow.

Graduate Awards
Figures for graduate appointments represent 2016-2017 stipends.

Graduate Scholarships support graduate study for students with superior qualifications; provide, in most cases, full tuition for academic year.

Graduate Teaching Assistantships offered to most Graduate Scholarship recipients; nine months; stipend of $24,000.00 (2016-2017) and tuition scholarship up to 24 credits (8 courses). Summer assistantships may be available. The assistant spends up to 20 hours per week engaged in teaching laboratory or recitation classes and in grading and preparation.

Graduate Research Assistantships no more than an average of 20 hours of work per week; a nine-month stipend of at least $24,000.00 (2016-2017) and tuition scholarship up to 24 credits (8 courses). Summer assistantships may be available. The research assistant is normally paid for research work performed in conjunction with a faculty member and leading to the master’s or doctor’s dissertations.

Syracuse University Fellowships Tax-free stipends of $24,795.000 (2016-2017) for nine months of full-time study; tuition scholarship for a total of 30 credits during the academic year.

Religion, PhD
Chair:
501 Hall of Languages
315-443-5713

Director of Graduate Studies:
501 Hall of Languages
315-443-3861

Faculty

Graduate students in the Department of Religion at Syracuse University forge a unique, creative, and rigorous program of study. The Department is distinctive in its focus on the category “religion” as an intellectually provocative and problematic concept rather than simply as a descriptive, institutional, or phenomenological label. The Department embraces two premises as fundamental to its educational program: 1) study of religion must be interdisciplinary, and 2) study of religion must investigate the material, textual, historical, and cultural dimensions of religions as well as the theories used to produce and analyze them.

The Department offers three concentrations in the
following interrelated areas in the study of religion. Each concentration gives sustained attention to religion, theory, bodies, gender and materiality.

COMMUNITIES AND IDENTITIES explores religion and spirituality in modern societies, both local and global, through the lenses of anthropology of religion and history of religions.

CRITIQUE, IMAGE AND POLITICS explores how religions shape and are shaped in aesthetics, ethics, psychology, sociology, philosophy, and political and cultural theory.

TEXTS AND CONTEXTS explores literary and performative expressions of religion, including scriptures, through the lenses of history, philosophy, literary theory, and rhetoric.

Students are admitted to graduate study in the Department of Religion to conduct innovative and interdisciplinary research in one concentration and one traditional or regional religious culture. Once admitted, they may select a secondary concentration and/or religious cultures.

The department can support study of the following traditional or regional religious cultures:

- African American
- American Indian
- Buddhist
- Christian
- East Asian
- Hindu
- Indigenous (the Americas)
- Jewish
- Middle Eastern
- Muslim
- South Asian

Ph.D. in Religion

The student seeking the Ph.D. in religion must hold the M.A. in religion (or its equivalent) and a minimum of 36 additional credits, 24 of which must be taken in the Department of Religion. 12 additional dissertation credits are required. The student must demonstrate competence in at least two languages other than English, one before matriculation and the other before the beginning of the third year of study. Students must take the departmental seminar in their concentration during each semester of their course work. Students must then complete the required courses in at least two language(s) other than English, one before matriculation and the other before the beginning of the third year of study. Students must also complete the dissertation. The completion of the dissertation and its oral defense are required to complete the Ph.D.

School Psychology, PhD

School Psychology*

Contact:
Tanya L. Eckert, Ph.D.
430 Huntington Hall
taeckert@syr.edu
(315)443-3141

Faculty

The school psychology program at Syracuse University is accredited by the American Psychological Association (APA Office of Program Consultation and Accreditation, 750 First Street NE, Washington, D.C. 20002-4242; 202-336-5979). Completion of the program satisfies the current requirements for certification and licensure in New York State. The residency requirements for the program includes at least one year in full-time residence at Syracuse University and at least two years of full-time study at Syracuse University. A minimum of three years total of full-time study is required for the doctoral degree. Full disclosure of education/training outcomes and information allowing for informed decision-making can be found at our web site http://psychology.syr.edu/graduate/School_Psychology_Program.html

The school psychology program is built on the scientist-practitioner training model. Within this model, students are encouraged to be data-based problem solvers, to seek converging information when making professional decisions, and to evaluate the outcomes of their services. Students are engaged in three strands of training throughout the program: coursework, clinical service, and research. Consistent with APA guidelines, exposure to clinical service occurs in a graded fashion beginning in the student's first year. Students also have opportunities to assist with teaching and to teach courses of their own. Clinical placements occur in schools, hospitals, and agencies serving a broad spectrum of individuals with a wide range of school psychological services (e.g., assessment, consultation, intervention).

The program is committed to creating a supportive environment for student training and mentoring, and attempts to attract students from diverse backgrounds (e.g., locale, gender, ethnicity, culture). Graduates of the program take positions in academic and/or research institutions, public and private schools, hospitals, and mental health centers that serve the needs of children.

Admission

Applications are considered for the fall term only, and the deadline for receipt of the completed application is December 1. The program receives approximately 70 applications per year for three to four openings. There are approximately 15 students in the program. Attrition rate in the program is less than 25 percent.

Most students entering the school psychology program have had an undergraduate major in either psychology or education, but the program is not restricted to these students. However, students with an undergraduate major in other fields may need more study in psychology and education than those who already have the appropriate foundation. Only full-time students are considered for admission. Students admitted to the program typically have a grade point average exceeding 3.0 and combined verbal and quantitative above the 50th percentile. Evidence of prior involvement in independent research (e.g., paper presentations) as well as mental health or education-related service (e.g., supervisor evaluations) is usually documented. The School Psychology program is strongly committed to the recruitment of individuals from diverse ethnic and cultural backgrounds.

Program Requirements

The program focuses on the integration of behavioral science and the application of psychological principles, with emphasis on direct and indirect service to children in the schools. Each semester students participate in a research group, a small informal seminar relating to the development and conduct of their research, progressing to the formulation and completion of the master's thesis (for those entering without a master's degree), and culminating in the doctoral dissertation.

The school psychology program is committed to providing high-quality doctoral training that prepares students to meet the needs of children in schools, hospitals, and other child-related settings. Students are trained to meet these needs directly through the assessment of learning and adjustment problems, individual and group counseling, and the design of school-and home-based intervention programs. Nine program goals guide training:

a.) demonstrate a thorough knowledge of psychology and educational theory and research;
b.) contribute to scholarship by applying research methods and tools of inquiry;
c.) demonstrate skills in the foundations of school psychology practice;
d.) provide a full range of psychological services in diverse and inclusive settings;
e.) use assessment data on student learning to adapt instruction and design treatment;
f.) engage in continuing professional growth;
g.) provide collaborative consultation with school personnel, families and caregivers, and direct care staff;
h.) adhere to professional, ethical, and legal practices.
The program incorporates a continuously integrated practicum-internship in the schools. Supervision of field experiences is provided by local psychologists. University faculty in the program, and adjunct faculty. All doctoral students are required to complete a full-time, one-year internship in a school system or in a combination of school systems and a clinic, institutional setting, or community agency. These are paid internships, with primary supervision (within jointly agreed upon guidelines) from the school system or agency involved.

The Ph.D. requires a minimum of 90 credits, including up to 18 thesis/dissertation credits, as well as 6 credits of internship described above. Students usually take three courses in both the fall and spring semesters and two during the summer term. Consistent with the American Psychological Association’s Guidelines and Principles for Accreditation of Programs in Professional Psychology and New York State’s Regulations of the Commissioner of Education, students must successfully complete coursework required for the doctoral degree under three categories: (a) the School Psychology Core (foundation courses, assessment, consultation and supervision, and practica) (33 credits); (b) Educational bases (psychoeducational practicum and either special education, counseling, or program evaluation) (6 credits); and (c) the Psychology Core (statistics and research design, human development, history and systems, biological bases, individual differences, learning and cognition, and social bases) (27 credits). After completing coursework requirements, students become candidates for the doctoral degree. Formal advancement to candidacy is based on successful completion of the master’s thesis (or its equivalent) and the comprehensive qualifying examination. This examination involves a written critical review of theory and research literature and a related research proposal in an approved area, an oral presentation of both the research and proposal, and an oral defense of the written and oral presentations. The student’s written dissertation proposal must be defended before a dissertation committee. Following the research, the student must defend the completed dissertation in an oral examination. Student progress is reviewed each semester by the faculty, and written feedback is provided to students.

Financial Assistance
All students are eligible for four years of funding which may include a stipend and a tuition scholarship for appointments as teaching or research assistantships; university fellowships, or clinical externships and internships. The department makes a determined effort to offer financial support to all graduate students.

Note:
*The official designation required by the New York State Board of Regents is School Psychologist.

Social Psychology, PhD

Contact:
Leonard Newman, Ph.D.
430 Huntington Hall
lsnnewman@syr.edu
(315)443-4633

Faculty

Since its creation in 1924, the program has embraced research as a central focus for the training of social psychologists. We train students with the skills necessary to function as applied or research scientists within one or more of the many sub-domains of social psychology. Our program explicitly adopts multidisciplinary themes to create a unique graduate training experience. The central focus of the social psychology program is the scholarship of the causes, consequences, and/or remediation of social challenges. Students are encouraged to pursue specific research interests that complement this broad programmatic theme.

Admissions
The admissions committee consists of social psychology area faculty members. This committee makes decisions on the admission of applicants to graduate school; students who have or will soon complete either bachelor’s or master’s degrees, and who qualify in the judgment of this committee are admitted. To make this judgment, the committee considers a candidate’s letters of recommendation, verbal and quantitative Graduate Record Examination (GRE) scores, previous grade record, personal statement, and whether the research interests of this student matches with a member of the faculty.

Program Requirements
Consistent with the general goal of the program, students are strongly encouraged to become involved in research at an early point in their training by participating in faculty research projects and by carrying out individual research under the guidance of faculty members. Accordingly, all students obtain extensive training in research methods, both within a classroom setting and in actual research practice. Students earn both the master of science (M.S.) and doctor of philosophy (Ph.D.) degrees; the master’s degree is a prerequisite for the Ph.D.

Coursework
The courses offered in the program consist of intensive exposure to the prominent theories and methods in social psychology. In order to qualify for the Ph.D., students are required to take 18 credits of theory-relevant coursework, which may consist of any combination of the following three-credit courses:

- PSY 640 - Psychology of Gender 3 credit(s)
- PSY 674 - Advanced Social Psychology 3 credit(s)
- PSY 675 - Social Influences on Human Sexual Behavior 3 credit(s)
- PSY 676 - Group Processes 3 credit(s)
- PSY 677 - Social Cognition 3 credit(s)
- PSY 678 - Attitude Change 3 credit(s)
- PSY 693 - Advanced Personality 3 credit(s)
- PSY 775 - Seminar in Social Psychology 3 credit(s) (when topic is appropriate)

Methods Courses
Students must also complete 15 credits of the following methods courses, one of which must be PSY 679:

- PSY 679 - Research Methods in Social Psychology 3 credit(s)
- PSY 691 - Meta-Analysis 3 credit(s)
- PSY 775 - Seminar in Social Psychology 3 credit(s) (when topic is appropriate)
- PSY 990 - Independent Study 1-6 credit(s) (up to nine credits)

Departmental Requirements
Finally, students are required to fulfill an additional 33 credits of departmental requirements including two required statistics classes. These requirements serve to ensure that the student’s training is well-rounded and well-grounded in methodological fundamentals.

Qualifying Examination for the Ph.D.
After a student completes the master’s degree and all requisite coursework, she or he selects one of two possible options to qualify as a doctoral candidate. These options are (a) writing a literature review of an area within social psychology in a style of reviews published in the Psychological Review (and similar sources); or (b) preparing for a written examination based on a list of readings. Once a student has passed the qualifying examination, she or he may select a topic and complete a dissertation regarding it. The student defends her or his work before her or his doctoral committee, including many social psychology faculty. It is recommended that the qualifying examination be satisfied during the third year of graduate school.

Doctoral Dissertation
When a student passes the qualifying examination,
she or he is a doctoral candidate and may select a topic on which to write a doctoral dissertation, which also must be defended before a committee composed of faculty members knowledgeable in the domain of the research. Before actually conducting the thesis research, the candidate defends a proposal for this work before this committee. It is recommended that the dissertation be completed during the student’s fourth year of graduate studies.

Other Requirements include:
- PSY 997 - Masters Thesis 1-6 credit(s)
- PSY 999 - Dissertation 1-15 credit(s)

Funding
The social psychology program tries to find sources of support for all of its students. This support may consist of fellowships, teaching assistantships, or research assistantships. A number of such assistantships are available, and outstanding students are placed into competition for University-wide fellowships. In addition, students are encouraged to apply for available external funding.

Speech Language Pathology, PhD

Chair:
Karen A. Doherty, Ph.D.
621 Skytop Road, Suite 1200
315-443-9637

Faculty
Soren Lowell, Linda Milosky, Jonathan Preston, Ellyn Riley, Victoria Tumanova plus emeritus
Professors, Mary Louise Edwards and Raymond Colton

Doctor of Philosophy Speech-Language Pathology

The Ph.D. program in Speech-Language Pathology consists of academic, research, and clinical experiences, with an emphasis on basic and applied science. Sponsorship of the Ph.D. student by a faculty member must be agreed upon prior to the time of enrollment. Interested students should contact the department to match with a faculty sponsor prior to applying.

Coursework for the Ph.D. degree in Speech-Language Pathology is individually designed. It may include courses within the Audiology/Communication Sciences and Disorders curriculum as well as a variety of courses in complementary areas such as psychology, engineering, computer science, statistics, sensory processes, neuroscience and gerontology. An additional specialty area of concentration may be obtained in some of these areas, such as in the Interdisciplinary Neuroscience Graduate Program or as part of the Aging Studies Institute. Each student’s program of study will be uniquely tailored to their interest and research areas.

The Ph.D. degree requires a minimum of 83 credits beyond the bachelor’s degree. Students begin their research experiences early in their programs and are mentored in faculty laboratories by completing a guided research experience in the first year, culminating in a submitted research paper. All Ph.D. candidates must pass a pre-qualifying exam at the end of their first year of full-time study and qualifying exams at the end of their coursework. These academic and research experiences lead to the dissertation, which is typically begun in the third year. The Ph.D. program is typically completed in 4-5 years of full-time study.

Admission Requirements:
Candidates for admission to the Ph.D. degree should possess a bachelor’s degree with a GPA of 3.5 or higher on a 4.0 scale in the last 60 semester credits of their undergraduate degree. If a candidate has a Master’s Degree or AuD, a minimum GPA of 3.5 in their graduate work is required. In addition, the candidate should obtain a minimum percentile score of 40% in the Verbal section, 50% in the Quantitative section, and a 4.0 in the Writing section on the Graduate Record Examination taken within the last 5 years. Acceptable TOEFL scores (105 Internet based) must also be submitted by applicants who are not native speakers of English. Three strong letters of recommendations and a personal statement indicating enthusiasm for pursuing research in the fields of Audiology or Speech Language Pathology will also be required when submitting application materials. In order to be admitted to the Ph.D. program, a CSD faculty member must agree to initially mentor a student. Therefore, prospective students must discuss their research interests with a faculty member of their own choosing in order to determine if these interests could be met within the department. The Ph.D. is a research degree and very little or no clinical training is offered. If a candidate is interested in obtaining such training, he or she should apply to the Master’s program or AuD in the department.

Admission
A student wishing to do graduate work in structural biology, biochemistry, and biophysics should apply for admission through one of the participating departments (biology, chemistry, or physics). Applicants must meet the general requirements of the Graduate School. Students are normally expected to have an undergraduate major in biology, chemistry, or physics, and a minor in one or both of the other fields. Students who do not have the appropriate minors must make up background deficiencies by taking courses or independent study.

Graduate Awards
Graduate students may qualify for scholarships or for teaching or research assistantships available through individual departments, or for University Fellowships. All awards are made on a competitive basis.

Facilities
There is a variety of nuclear magnetic resonance, microarray, x-ray diffraction, next-generation sequencing, and other instrumentation at Syracuse University and SB3 partner institutions, SUNY Upstate Medical University, and the SUNY College of Environmental Science and Forestry. There are also extensive computational facilities for biomolecular modeling and bioinformatics.

Ph.D. in Structural Biology, Biochemistry, and Biophysics

This Ph.D. program is flexible and adaptable to individual needs. Students are admitted through one of the participating departments, (biology, chemistry, or physics), choose their Ph.D. mentor in that department, and must complete at least one year in their major department before transferring into the program. Students must be in good standing in their major department prior to transferring into the program and must maintain the requirements of the Graduate School throughout their graduate career. Subsequent to transfer, the remainder of the program is planned with a graduate committee composed of members of the program, one of whom will be the student’s thesis advisor. This committee is also responsible for administering a qualifying examination and a dissertation defense, and for resolving issues that
may arise during the student’s graduate career. The graduate committee may require students to acquire breadth by taking graduate-level courses in areas outside their major concentration.

**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.

**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.

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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.

**English and Textual Studies Secondary Teacher Preparation, BA/MS**

Combined 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.
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 Latino-Latin 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.

**Law/Forensic Science, JD/MA**

Law/Forensic Science

For those entering the legal profession, an understanding of the scientific analysis of evidence can greatly contribute to their effectiveness both in and out of court. Both forensic science methods and their handling in court proceedings have undergone marked changes over recent years, and knowledge of both aspects will best prepare students for their future encounters with forensic evidence.

The Juris Doctor/Master's of Science in Forensic Science (General Forensic Track or Forensic Laboratory Track) are combined degrees which may be conferred by the College of Arts and Sciences and the College of Law. A student who is admitted to one of these programs has the opportunity to obtain both the J.D. degree and the M.S. Forensic Science degree in substantially less time than would be required were the two degrees to be obtained independently.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

**Law/Philosophy, JD/PhD**

Law/Philosophy

The Juris Doctor/Master of Arts in Philosophy and Juris Doctor/Doctor of Philosophy are joint degrees which may be conferred by the College of Law and the Syracuse University Department of Philosophy. Students enrolled in these programs may obtain their J.D. and M.A or Ph.D. in Philosophy in substantially less time than would be necessary if both programs were separately pursued.

Questions concerning and general inquiries should be directed to Professor Thomas McKay, Philosophy Department, 541 Hall of Languages (443-2536; tmckay@syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

**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.

**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.

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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.

**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.

**Arts Leadership Administration, CAS**

**Faculty:**

Shena Ashley, Assistant Professor
Johann Comprix, Assistant Professor
Dennis Kinsey, Professor
Ernest Lathrop, Assistant Professor
Mark Nerenhausen, Professor of Practice
John Petosa, Professor of Practice
Casey Sprock, Adjunct Professor
Brenda Wrigley, Associate Professor

**Description:**

The Arts Leadership Certificate Program is a 15-credit hour program for recent college graduates and experienced practitioners. Candidates acquire core skills to develop career options in allied fields or advance their careers in cultural leadership of for-profit or non-profit arts organizations in the visual and performing arts. The curriculum encompasses coursework in entrepreneurship and leadership; marketing and public relations; financial accounting and budgetary planning; operations; strategic planning and analysis; financial and audience development; education and outreach; and legal, ethical, and public policy issues in the arts.

**Admission:**

Applicants must have a B.A. or B.S. degree from an accredited college or university and strong GRE test scores or be enrolled in an MA in process, and demonstrate knowledge of the arts or business management or both.

Required Application Documentation: A 500-word personal statement explaining the applicant’s motivation for studying arts leadership. The essay should include the applicant’s career goals and work experience, and how they have informed his or her decision to apply to the program. Three (3) letters of recommendation - One (1) copy of official transcript(s) - The Graduate Record Examination (GRE) scores - Test of English as a Foreign Language (TOEFL) for international applicants.

**Requirements:**

Students must maintain a Graduate School required minimum GPA of 3.0

Transfer credit may be considered on a case-by-case basis

Program may be pursued on a part-time basis

Limited financial support may be available

**Degree:**

Certificate of Advanced Study in Arts Leadership

**Total Credits:** 15
Econometrics, CAS

Contact:
Pinyuen Chen (pinchen@syr.edu)

The application of statistics to economics is commonly called econometrics. Statistics and econometrics have become more closely associated as scholars and practitioners in both areas have learned from each other and adopted ideas learned in the other area. Given this convergence, a certificate offered by Syracuse University that requires knowledge of the contributions of both disciplines is both timely and appropriate.

Certificate Requirements
To obtain the certificate a student must successfully complete
• ECN 621 - Econometrics I 3 credit(s)
• ECN 622 - Econometrics II 3 credit(s)
• ECN 720 - Topics in Econometrics 3 credit(s)
• MAT 651 - Probability and Statistics I 3 credit(s)
• MAT 652 - Probability and Statistics II 3 credit(s)

European Union & Contemporary Europe, CAS
Margaret G. Hermann
Professor of Political Science
and Gerald B. and Daphna Cramer Professor of Global Affairs Director,
Moynihan Institute of Global Affairs
Office: 345 Eggers Hall
Telephone: 315-443-4022
Fax: 315-443-9085
E-mail: mgherman[maxwell.syr.edu

The Certificate of Advanced Study in the European Union (EU) and Contemporary Europe is available to students in all professional and doctoral programs at Syracuse University who are looking to supplement their degree with a strong foundation in this region’s politics and culture or to prepare themselves for a career involving specialization in this region. In completing the certificate program, students are required to take at least 12 credit hours of study focused on the region, including one of the required courses and nine credits from a set of approved courses and/or approved other activities such as internships, independent study, or capstone experiences. For more information, visit the program website:
http://www.maxwell.syr.edu/moynihan/merc/Graduate_Certificate_in_the_EU_and_Contemporary_Europe/

Admission:
Admission to this certificate program is open to all graduate students enrolled in Syracuse University interested in learning more about and acquiring a specialization in the European Union and contemporary Europe. Interested students are encouraged to interact with the director of the certificate program early in their tenure to develop a program of study as well as to complete the Graduate School’s Internal Admission form enrolling in the program.

Program Requirements:
Twelve credits in four courses must be earned to be eligible for the certificate. These must include:

The choice of one of the required courses:
• PSC 756 - Politics of the European Union 3 credit(s)
• PSC 600 - Selected Topics 1-6 credit(s) The EU and Beyond: Identity, Politics, and the New Europe *
• ANT 670 - Experience Credit 1-6 credit(s) The Culture and Politics of Reconciliation in Central Europe **
• HUM 670 - The Culture and Politics of Reconciliation in Central Europe **
• SOC 670 - Experience Credit 1-6 credit(s) The Culture and Politics of Reconciliation in Central Europe **

Elective Courses and/or Approved Other Activities
Nine credits from a set of elective courses and/or approved other activities such as internships, independent study, or capstone experiences.

Electives:
• ANT 629 - Transformation of Eastern Europe 3 credit(s)
• ANT 673 - Peace and Conflict in the Balkans: Anthropological Perspectives 3 credit(s) or
• PAI 730 - Problems in Public Administration 1-3 credit(s)
• ANT 701 - Seminar on Multilateral Peacekeeping 3 credit(s) or
• PAI 701 - Seminar on Multilateral Peacekeeping 3 credit(s)
• FRE 600 - Selected Topics 1-6 credit(s) Contemporary France in Literature & Film *
• FRE 600 - Selected Topics 1-3 credit(s)
• GER 600 - Selected Topics 1-6 credit(s)
• HST 735 - Readings and Research in European History 3 credit(s)
• LAW 910 - Law in London: Clinical Internship 6 credit(s) ***
• PHI 640 - Continental Philosophy of Religion 3 credit(s) or
• REL 660 - Continental Philosophy of Religion 3 credit(s)
• PAI 715 - Topics in Global Development 3 credit(s) Issues in Global Economic and Financial Security ****
• PAI 715 - Topics in Global Development 3 credit(s) International Economic Negotiations ****
• PAI 715 - Topics in Global Development 3 credit(s) Statecraft and Smart Power in the Digital Era ****
• PAI 727 - Responding to Proliferation of Weapons of Mass Destruction 3 credit(s)
• PAI 788 - Global Issues: Drugs, Crime and Terrorism 3 credit(s)
• PAI 716 - Economic Dimensions of Global Power 3 credit(s) or
• ECN 610 - Special Topics in Economics 3 credit(s) Economic Dimensions of Global Power
• PSC 769 - Comparative Parties and Politics 3 credit(s)
• PSC 783 - Comparative Civil-Military Relations 3 credit(s)
• PSC 786 - Russian and Post-Soviet Politics 3 credit(s)
• PSC 788 - Political Leadership 3 credit(s)
• PSC 700 - Selected Topics 1-6 credit(s) Crisis Management or
• PAI 700 - Selected Topics 1-6 credit(s) Crisis Management
• PSC 600 - Selected Topics 1-6 credit(s) European National and International Conflict: What Alternatives to Violence *
• PSC 600 - Selected Topics 1-3 credit(s) European Human Rights *
• SPA 653 - Sinner and Saints in 19th and 20th Century Spanish Literature and Film 3 credit(s)
• SPA 658 - Narrative and Film in Spain (1940 to the Present) 3 credit(s)

Note:
*Offered during Summer at the University’s Strasbourg Center in France.
**Offered during Summer in Strasbourg, Berlin, and Wroclaw.
****Offered during Summer in London.
****Offered during Fall at the University’s Washington, DC Center.

Credits Towards the Certificate
In addition to these classes, students may also earn credits towards the Certificate in the following ways:
Students can take a maximum of six-credit hours in any of the regional languages offered at the University at the 600 level. Turkish, Portuguese, and Polish are also considered regional languages in addition to those more generally considered when focusing on Europe.

Students can take a maximum of three-credit
hours for an internship experience in Europe or for the completion of a capstone course that focuses on a topic related to contemporary Europe or the EU (with the approval of the Director of the Certificate Program).

**Firearm and Toolmark Examination, CAS**

**Contact:**
Michael Sponsler, Sponsler@syr.edu
315-443-4880

**Faculty:**
Robert Silver, James T. Spencer, Michael B. Sponsler, Kevin Sweder, Ulrich Englisch

**Description:**
This CAS is intended both for students who wish to become firearm and toolmark examiners and for newly hired examiners in need of training. A great need exists for training of firearm and toolmark examiners. Even after a candidate is hired into such a position, training of two years or more is typically needed before the new examiner can work independently on casework. This training comes at great expense particularly to smaller agencies, where efficiencies associated with the simultaneous training of multiple candidates cannot be achieved. This CAS, while not intended to fulfill all of the required training, can provide a useful start and/or supplement. The same courses may be counted toward a graduate degree at Syracuse University.

**Admission:**
For students already admitted to Syracuse University as graduate students, an internal application for the CAS is required. For students not already at SU, the graduate school application with undergraduate transcript and one recommendation letter will be required, through which the applicant must show either that he or she holds a position for which the certificate is relevant or is aiming to obtain such a position and has a good undergraduate background.

**Requirements:**

**Gateway Course - 9 Credits**
- FSC 633 - Quality Assurance and Ethics 3 credit(s)
- FSC 661 - Firearms and Impression Evidence 3 credit(s)
- FSC 671 - Firearms and Impressions Evidence II 3 credit(s)

**Electives - 3 Credits**

**Total Credit: 12**

**Degree Awarded:**
Certificate of Advanced Study in Firearm and Toolmark Examination

**Program Requirements**
12 credits of study are required for the CAS in Language Teaching: TESOL/TLOTE: three required courses and one elective course. Required courses provide essential grounding in the mechanics of language, a foundation in language teaching methodology, and a teaching practicum. Elective courses will enable specialization in an area of professional interest.

**Required Courses (9 credits):**
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 621 - Introduction to Methodology of Teaching Languages: English/Foreign Language Teaching 3 credit(s)
- LIN 622 - Advanced Methods of Teaching Languages: English/Foreign Language Teaching 3 credit(s)

**Language Teaching:**

**TESOL/TLOTE, CAS**

Amanda Brown
abrown08@syr.edu
340 H. B. Crouse
315-443-2244

**Faculty**
Tej K. Bhatia, Amanda Brown, Mary Louise Edwards, Gerald R. Greenberg, Pania Habib, Jaklin Kornfilt, Thomas McKay, Zaline M. Roy-Campbell, Maria Emma Ticio Quesada, Susan S. Wadley, Louise C. Wilkinson, Bei Yu

The Certificate of Advanced Studies in Language Teaching: TESOL/TLOTE is a 12-credit graduate-level program focusing on the teaching of English to speakers of other languages (TESOL) and the teaching of languages other than English (TLOTE). It prepares individuals for careers teaching languages in a variety of contexts.

**The Certificate:**
qualifies students for entry-level language teaching positions in English and languages other than English in the USA and for some higher-level language teaching positions overseas. In combination with other advanced degrees, it may provide further academic and professional opportunities. It enables students to teach languages other than English in various contexts. It helps students who are very early in their career or those who are seeking a mid-career change to a field becoming more competitive as employers increasingly look for candidates with accredited qualifications. It assists students in later pursuing a further graduate education. For example, all credits are applicable to the completion of an MA in Linguistic Studies with a concentration in Language Teaching, a 30-credit degree program which qualifies students for higher-level language teaching positions and teacher training or managerial positions in the US and abroad.

**One elective specialization course**
(3 credits) in one of following areas:
- Assessment
- Culture and Society
- Language Acquisition
- Language Structure
- Learning Populations
- Literacy
- Materials Design
- Program Management

**Program Duration**
The CAS in Language Teaching: TESOL/TLOTE can be completed in three semesters:
**Fall:**
- LIN 601 - Introductory Linguistic Analysis 3
College of Arts and Sciences

Latin American Studies, CAS
Program on Latin America and the Caribbean
346 Eggers Hall
315.443.9467

Certificate Requirements
This certificate certifies successful completion of 12 credits of graduate courses from a variety of disciplines related to Latin American themes. For a course to be eligible for the PLACA Certificate, the PLACA director must agree that its Latin American content is at least 50% of the overall course content.

I. Gateway Course - 3 Credits Required

- FSC 635 - Medicolegal Death Investigation I 3 credit(s)

II. Electives - 9 Credits Required

- FSC 636 - Medicolegal Death Investigation II 3 credit(s)
- FSC 637 - Medicolegal Death Investigation for Emergency Responders 3 credit(s)

Program Description:
The Advanced 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, forensic scientists, and medical and legal personnel. 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. In the case of legal professionals, the knowledge will aid their interpretation of medical examiner reports and help them to know what questions to ask. Thus, this certificate program will help these various people become more effective in their own professions as it intersects with death investigation.

Requirements:

Contact:
Michael Sponsler, sponsler@syr.edu
Professor of Chemistry, Director of Curricular Programs for the Forensic and National Security Sciences Institute at Syracuse University

Faculty:
Michael Sponsler, sponsler@syr.edu
1-014 Center Sci & Tech
315-443-4880

Program Director:
Mehrzad Boroujerdi
332 Eggers Hall
315-443-5877
mborouje@maxwell.syr.edu

Certificate of Advanced Study in Medicolegal Death Investigation

Total Credits: 12 (limit of 3 transfer credits)

Transfer Credit:
Maximum of 3 credits

Part-time Study:
May be pursued

Degree:
Certificate of Advanced Study in Medicolegal Death Investigation

Note:
*Relevant workshops will be run under FSC 640, and these will be identified as appropriate for use as electives in this program.
Ahmed E. Abdel-Meguid, Carol Babiracki, Hossein Bashiriyeh, Mehrzad Boroujerdi, Zachary J. Braiterman, Miriam Fenidius Elman, Carol Fadda-Conrey, Ken Frieden, Rania Habib, Susan Henderson, Amy Kallander, Tazim R. Kassam, Osamah F. Khaill, Amos Kiewe, Natalie Koch, Jaklin Kornfilt, Dana M. Oluwan, Kara Richardson, Robert A. Rubinstein, Ossama “Sam” Salem, Yuksel Sezgin, James W. Watts

The Certificate of Advanced Studies in Middle Eastern Affairs is available to Syracuse University students in all graduate programs who are looking to supplement their degree with a strong foundation in the region’s culture and politics or to prepare for a career involving regional specialization. Students are required to complete at least twelve credits: a single three-credit required course and nine credits in the form of approved electives chosen from affiliated departments within the University and/or approved extracurricular experience.

**Obtaining the Certificate**

Students interested in obtaining the Certificate of Advanced Studies in Middle Eastern Affairs should consult the list of required and elective courses and other credit-bearing activities. Application for the Certificate should be made by first consulting with the student’s Faculty Advisor who will determine whether the student can pursue the Certificate consistent with the requirements of his/her degree program, and then by speaking with the Director of the Certificate Program, Professor Mehrzad Boroujerdi.

**Administrative Steps**

Two forms must be filled out and delivered to the Middle Eastern Studies Program to complete this application stage:

Students who have completed at least six credits of related coursework in Middle Eastern Studies should complete the Graduate Enrollment Internal Admission Application form to receive admission to the program. Once completed, the form should be submitted to Ms. Amy Marsden at the Moynihan Institute (346 Eggers Hall) who will sign for the Middle Eastern Studies Program and pass it on to the Graduate Admissions office (621 Skytop Road). Please note that the “Program Code” for the certificate in Middle Eastern Affairs is MI1CAS. The Program of Study form has to be signed by the student’s advisor and by Professor Mehrzad Boroujerdi (332 Eggers Hall) who is the Director of the Middle Eastern Studies Program. The Program of Study will be held by Ms. Amy Marsden until all the requirements for the certificate (twelve credits) are complete. Ms. Marsden will submit this form to the Graduate Certification Office (107 Steele Hall) in a timely manner before the student's expected graduation date so that the documents and information can be gathered as the graduation date approaches.

Please also remember that a Graduate Diploma Request Form must be completed through MySlice during the semester the student will graduate. Students must complete a separate form for each of their degree programs as each results in its own degree date and diploma. The Director will recommend granting the Certificate to students who have met all of the requirements (while maintaining a cumulative GPA of at least 3.0 for all classes taken toward it) and who are in good standing in their graduate school or department.

Program Requirements

Twelve credits in four courses must be earned to be eligible for the certificate. These must include:

1. **The choice of one of the program’s two foundational graduate-level courses**
   
   (substitutions may be made in some cases with permission from the Director):
   
   - MES 682 - Social Theory and Middle East Politics 3 credit(s)
   - MES 644 - Israel and Palestine: Historical Approaches 3 credit(s)

2. **Nine Total Elective Credits**

Nine total elective credits chosen from the list of affiliated classes, the University’s language offerings, experiential education, and study abroad. The following classes have already been approved by the program:

- MES 668 - Middle East in Anthropological Perspective 3 credit(s)
- MES 707 - Culture in World Affairs 3 credit(s)
- ARC 735 - Islamic Architecture 3 credit(s)
- MES 644 - Israel and Palestine: Historical Approaches 3 credit(s)
- MES 682 - Social Theory and Middle East Politics 3 credit(s)
- MES 684 - International Relations of the Middle East 3 credit(s)
- REL 628 - Muslim Rituals, Practices, and Performances 3 credit(s)
- REL 676 - Religion and Jewish Literature 3 credit(s)
- REL 607 - Ancient Religious Rhetoric 3 credit(s)
- REL 625 - Pluralism in Islam 3 credit(s)

Credits Towards the Certificate

In addition to these affiliated classes, students may also earn credits towards the Certificate in the following ways:

A maximum of six credits of any regional language courses at the 600 level (i.e., 620).

Extracurricular experience (i.e., internships) that may count for between one and three credits (with the approval of the Program Director).

A maximum of six credits of graduate-level Middle East-related independent study or special topics courses.

A maximum of six credits of relevant, departmentally-approved coursework taken at another university. The Middle Eastern Studies Program, the Maxwell School and Syracuse University presently have established student exchange relationships with the American University in Cairo (Egypt), Bahçeşehir University (Turkey), Bogazici University (Istanbul, Turkey), An Najah University (Nablus, Palestine), and the Interdisciplinary Center (Herzliya, Israel).

**Prerequisite:**

In order to enroll in the Certificate program, you must be a matriculated Syracuse University graduate student in good standing and have completed at least six credits of coursework in related classes.

**Extracurricular Opportunities:**

Internships: Graduate students can receive a maximum of three credits for an internship in any governmental/non-governmental organization based either in the region or outside which deals strongly with the Middle East.

Fieldwork: The Moynihan Institute of Global Affairs at the Maxwell School usually allocates one or two annual summer research grants for Maxwell doctoral students. The purpose of the award is to provide students the opportunity to gather data, undergo advanced language training, and increase competitiveness of future proposals for funding. Grants range from $1,000 to $3,000 and will be assigned on merit. Grant awardees register and receive credit for an independent study course (typically three credits). Students who have secured outside sources of funding may also submit proposals for fieldwork through independent study.

Other Awards: MESP Young Scholar Prize is awarded annually to the best essay by a graduate student at the University dealing with any aspect of the Middle East. The author of the winning paper is presented with a certificate and a $500 prize.

**South Asian Studies, CAS**

**Faculty**


**Affiliated Faculty:**

Ahmed Abdel Meguid, Sarosh Anskesaria, Mehrzad Boroujerdi, Richard Breyer, Thomas Brutsaert, Gareth Fisher, Rashmi Gangamma, Roger Hallas, Devashish Mitra, Lars Rodseth, Kamala Ramadoss,
Certificate Requirements

The Certificate of Advanced Study (CAS) in South Asian Studies is available to Syracuse University students in all graduate programs who are looking to supplement their degree with an interdisciplinary approach to the cultures, politics, history, arts, and current events of this region. Students are required to complete at least twelve (12) credits.

Students matriculated in any MA or PhD program at Syracuse University and who have completed 12 graduate credit-hours in courses dealing with South Asia are eligible to apply to the Director of the South Asia Center for a "Certificate of Advanced Study in South Asia." The Director shall determine that the courses listed by the student meet the requirements for the Certificate. Graduate students may apply at any time after they are matriculated in a graduate program at SU, but it is advisable to wait until their final semester or until they have completed the 12 credit hours.

Candidates for the CAS must take one of the following courses:

- ANT 621 - Gender & Sexuality in South Asia 3 credit(s) or
  - SAS 621 - Language Training in Preparation for Research Using Hindi 3 credit(s)
  - ANT 625 - Problems in Anthropology of South Asia 3 credit(s)
- ANT 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
  - SAS 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
  - PAI 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
  - HIN 620 - Language Training in Preparation for Research Using Hindi 3 credit(s)
  - HST 775 - Readings and Research in South Asian History 3 credit(s)
  - REL 687 - Global Hinduism 3 credit(s)

Candidates can choose three other courses from the list below:

- ANT 621 - Gender & Sexuality in South Asia 3 credit(s) or
  - SAS 621 - Language Training in Preparation for Research Using Hindi 3 credit(s)
  - ANT 625 - Problems in Anthropology of South Asia 3 credit(s)
- ANT 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
  - SAS 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
  - PAI 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or

ANT 628 - Muslim Rituals, Practices, and Performances 3 credit(s) * or
REL 628 - Muslim Rituals, Practices, and Performances 3 credit(s) *

- ANT 756 - Development Anthropology 3 credit(s) *
- ANT 764 - Gender and Globalization 3 credit(s) *
- GEO 764 - Gender and Globalization 3 credit(s) *
- WGS 764 - Gender and Globalization 3 credit(s) *
  - HIN 620 - Language Training in Preparation for Research Using Hindi 3 credit(s)
  - HST 715 - Readings and Research in American History 3 credit(s)
  - HST 775 - Readings and Research in South Asian History 3 credit(s)
  - LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s) *
  - LIN 681 - Global Communication Through World Englishes 3 credit(s) *
  - PAI 707 - Culture in World Affairs 3 credit(s) *
  - PAI 715 - Topics in Global Development 3 credit(s) *
  - PAI 758 - Public Finance in Developing Areas 3 credit(s) *
  - REL 621 - Teaching World Religions in Theory and Practice 3 credit(s) *
  - REL 625 - Pluralism in Islam 3 credit(s) *
  - REL 626 - Beyond the Veil: Gender Politics in Islam 3 credit(s) *
  - REL 626 - Beyond the Veil: Gender Politics in Islam 3 credit(s) *
  - SAS 626 - Cultures and Politics of Afghanistan and Pakistan Muslim Women Beyond the Veil *
  - REL 627 - Globalization and Religion: Processes and problems 3 credit(s) *
  - REL 687 - Global Hinduism 3 credit(s)
  - REL 692 - Other People's Religions 3 credit(s) *
  - REL 696 - Gender and Religion: Theory and Practice 3 credit(s) *
  - REL 699 - Writing Religions and Cultures: Ethnographic Practice 3 credit(s) *

Note:
*Some South Asian content is included (30% or more). Students may use these courses for the certificate only if they write their research paper on a South Asian topic.

Women’s Studies, CAS
Department of Women’s and Gender Studies
340 Sims Hall
315-443-3560

Certificate Requirements

Students must take a minimum of 12 credits of graduate coursework cross-listed as WGS courses or approved by the Chair of the Department of Women’s and Gender Studies. At least one course (3 credits) must be an approved Theory course and at least one course (3 credits) of the CAS coursework must be a Core Graduate WGS course. A single course may not be used to fulfill both the Theory and Core course requirements.

Approved WGS Theory Courses:
- WGS 601 - Feminist Theories 3 credit(s)
- WGS 636 - Feminist Rhetoric(s) 3 credit(s)
- WGS 644 - Feminist Theology 3 credit(s) (IR)
- WGS 652 - Feminism and Postcolonial Studies 3 credit(s)
- WGS 671 - Latin American Literature and Feminist Theory 3 credit(s)
- WGS 673 - Women, Rap and Hip-Hop Feminism 3 credit(s)
- WGS 701 - Intersectionality 3 credit(s)
- WGS 705 - Negotiating Difference: Coming of Age Narratives 3 credit(s)
- WGS 710 - Feminist Inquiries 3 credit(s)
WGS 740 - Feminist Theories of Knowing 3 credit(s) (O)
• WGS 757 - Black Feminist Theories 3 credit(s)
WGS 795 - Practice of Transnational Feminism 3 credit(s) (IR)

Additional Information
With departmental approval, various sections of Special Topics courses can satisfy the WGS Theory requirement as well.

Core Graduate WGS Courses:
WGS 601 - Feminist Theories 3 credit(s) (Y)
• WGS 625 - Feminist Organizations 3 credit(s)
WGS 636 - Feminist Rhetoric(s) 3 credit(s) (Y)
WGS 652 - Feminism and Postcolonial Studies 3 credit(s) (Y)
• WGS 673 - Women, Rap and Hip-Hop Feminism 3 credit(s)
• WGS 701 - Intersectionality 3 credit(s)
WGS 705 - Negotiating Difference: Coming of Age Narratives 3 credit(s) (IR)
• WGS 710 - Feminist Inquiries 3 credit(s)
WGS 740 - Feminist Theories of Knowing 3 credit(s) (O)
WGS 757 - Black Feminist Theories 3 credit(s) (Y)
WGS 795 - Practice of Transnational Feminism 3 credit(s) (Y)

Additional Information
With departmental approval, various sections of Special Topics courses can satisfy the Core WGS requirement as well.

Admissions
The Certificate of Advanced Study (CAS) in women's and gender studies is a 12-credit graduate-level certificate that can be taken as a stand-alone certificate or as part of a graduate degree program. Current students already matriculated in a master’s or doctoral program must apply for certification at least one semester before receiving their degree. The chair of the Department of Women’s and Gender Studies will confer with each student and approve each student’s program. A list of appropriate courses is available in the Department of Women’s and Gender Studies office, 340 Sims Hall, 315-443-3707.

Graduate Award
Awarding of the Certificate of Advanced Studies will be in the spring semester of each year.

Certificate of Recognition
Certificates of Recognition are awarded to doctoral students who have produced dissertations in Women’s/Feminist Studies. To receive certification, the candidate must submit a petition listing the title and abstract of the dissertation, the defense date, and the dissertation advisor. Awards will be made at the end of the spring semester of each year.

Prizes
Each spring there is an essay contest for the Toni Taverone Graduate Paper Prize that carries an award. The Joan Lukas Rothenberg Graduate Student Service Award is also awarded annually.
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Institution</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmed E. Abdel-Meguid</td>
<td>Assistant Professor</td>
<td>Ph.D. Emory University, 2011</td>
<td>Islamic theology and philosophy; German transcendental philosophy, phenomenology, and hermeneutics.</td>
</tr>
<tr>
<td>Marian Abdullah</td>
<td>Adjunct Instructor</td>
<td>M.A., University of Tennessee-Knoxville, 1974</td>
<td>Poetry</td>
</tr>
<tr>
<td>Meera Adya</td>
<td>Director of Research</td>
<td>Burton Blatt Institute, College of Law</td>
<td>Cognitive/behavioral interventions, employment discrimination, genetic discrimination, disability.</td>
</tr>
<tr>
<td>Philip P. Arnold</td>
<td>Associate Professor</td>
<td>Ph.D., Northwestern University, 1986</td>
<td>Elementary particle theory</td>
</tr>
<tr>
<td>Carol Babiacki</td>
<td>Associate Professor</td>
<td>Ph.D., University of Illinois, 1991</td>
<td>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.</td>
</tr>
<tr>
<td>A. Balachandran</td>
<td>Joel Dorman Steele Professor of Physics</td>
<td>Ph.D., Madras University, 1962</td>
<td>Elementary particle theory</td>
</tr>
<tr>
<td>Suzanne L. Baldwin</td>
<td>Michael G. and Susan T. Thonis Professor of Earth Sciences</td>
<td>Ph.D., State University of New York at Albany, 1988</td>
<td>Mineralogy, petrology, thermochronology, tectonics.</td>
</tr>
<tr>
<td>Stefan Ballmer</td>
<td>Assistant Professor</td>
<td>Ph.D., MIT, 2006</td>
<td>Theoretical Astrophysics, gravitational Waves</td>
</tr>
<tr>
<td>Uday Banerjee</td>
<td>Professor</td>
<td>Ph.D., University of Maryland, 1985</td>
<td>Numerical solutions of differential equations</td>
</tr>
<tr>
<td>Crystal Bartolovich</td>
<td>Associate Professor, English</td>
<td>Ph.D., Emory University, 1993</td>
<td>Marxism, early modern studies, cultural studies</td>
</tr>
<tr>
<td>Kenneth Baynes</td>
<td>Professor, Philosophy and Political Science</td>
<td>Ph.D., Boston University, 1987</td>
<td>Social and political philosophy, critical theory, continental philosophy.</td>
</tr>
<tr>
<td>Darri Beam</td>
<td>Associate Professor, English</td>
<td>Ph.D., University of Virginia, 2001</td>
<td>Nineteenth-century American literature and culture, gender and sexuality studies, race and nineteenth-century American literature.</td>
</tr>
<tr>
<td>Frederick C. Beiser</td>
<td>Professor</td>
<td>D.Phil., Oxford University (United Kingdom), 1980</td>
<td>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.</td>
</tr>
<tr>
<td>John M. Belote</td>
<td>Professor</td>
<td>Ph.D., University of North Carolina, Chapel Hill, 1979</td>
<td>Early modern philosophy, Kant, German idealism, 19th Century Philosophy.</td>
</tr>
<tr>
<td>Patrick W. Berry</td>
<td>Assistant Professor, Writing Program</td>
<td>Ph.D., University of Illinois at Urbana-Champaign, 2011</td>
<td>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 &amp; Composition.</td>
</tr>
<tr>
<td>Tej K. Bhatia</td>
<td>Professor</td>
<td>Ph.D., University of Illinois, 1978</td>
<td>Hindi, linguistics; Indic languages, literature, and linguistics.</td>
</tr>
<tr>
<td>Himika Bhattacharya</td>
<td>Assistant Professor</td>
<td>Ph.D., University of Illinois at Urbana Champaign, 2008</td>
<td>Feminist Theory, Third World and Transnational Feminisms, Feminist Ethnography.</td>
</tr>
<tr>
<td>Marion E. Bickford</td>
<td>Professor Emeritus</td>
<td>Ph.D., University of Chicago, 1986</td>
<td>Petrologist and isotope geochemist</td>
</tr>
<tr>
<td>Meera Adya</td>
<td>Adjunct Instructor</td>
<td>M.A., University of Tennessee-Knoxville, 1974</td>
<td>Poetry</td>
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<tr>
<td>Philip P. Arnold</td>
<td>Associate Professor</td>
<td>Ph.D., Northwestern University, 1986</td>
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</tr>
<tr>
<td>Carol Babiacki</td>
<td>Associate Professor</td>
<td>Ph.D., University of Illinois, 1991</td>
<td>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.</td>
</tr>
<tr>
<td>A. Balachandran</td>
<td>Joel Dorman Steele Professor of Physics</td>
<td>Ph.D., Madras University, 1962</td>
<td>Elementary particle theory</td>
</tr>
<tr>
<td>Suzanne L. Baldwin</td>
<td>Michael G. and Susan T. Thonis Professor of Earth Sciences</td>
<td>Ph.D., State University of New York at Albany, 1988</td>
<td>Mineralogy, petrology, thermochronology, tectonics.</td>
</tr>
<tr>
<td>Stefan Ballmer</td>
<td>Assistant Professor</td>
<td>Ph.D., MIT, 2006</td>
<td>Theoretical Astrophysics, gravitational Waves</td>
</tr>
<tr>
<td>Uday Banerjee</td>
<td>Professor</td>
<td>Ph.D., University of Maryland, 1985</td>
<td>Numerical solutions of differential equations</td>
</tr>
<tr>
<td>Crystal Bartolovich</td>
<td>Associate Professor, English</td>
<td>Ph.D., Emory University, 1993</td>
<td>Marxism, early modern studies, cultural studies</td>
</tr>
<tr>
<td>Kenneth Baynes</td>
<td>Professor, Philosophy and Political Science</td>
<td>Ph.D., Boston University, 1987</td>
<td>Social and political philosophy, critical theory, continental philosophy.</td>
</tr>
<tr>
<td>Darri Beam</td>
<td>Associate Professor, English</td>
<td>Ph.D., University of Virginia, 2001</td>
<td>Nineteenth-century American literature and culture, gender and sexuality studies, race and nineteenth-century American literature.</td>
</tr>
<tr>
<td>Frederick C. Beiser</td>
<td>Professor</td>
<td>D.Phil., Oxford University (United Kingdom), 1980</td>
<td>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.</td>
</tr>
<tr>
<td>John M. Belote</td>
<td>Professor</td>
<td>Ph.D., University of North Carolina, Chapel Hill, 1979</td>
<td>Early modern philosophy, Kant, German idealism, 19th Century Philosophy.</td>
</tr>
<tr>
<td>Patrick W. Berry</td>
<td>Assistant Professor, Writing Program</td>
<td>Ph.D., University of Illinois at Urbana-Champaign, 2011</td>
<td>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 &amp; Composition.</td>
</tr>
<tr>
<td>Tej K. Bhatia</td>
<td>Professor</td>
<td>Ph.D., University of Illinois, 1978</td>
<td>Hindi, linguistics; Indic languages, literature, and linguistics.</td>
</tr>
<tr>
<td>Himika Bhattacharya</td>
<td>Assistant Professor</td>
<td>Ph.D., University of Illinois at Urbana Champaign, 2008</td>
<td>Feminist Theory, Third World and Transnational Feminisms, Feminist Ethnography.</td>
</tr>
<tr>
<td>Marion E. Bickford</td>
<td>Professor Emeritus</td>
<td>Ph.D., University of Illinois, 1960</td>
<td>Petrologist and isotope geochemist</td>
</tr>
</tbody>
</table>
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.A., University of Iowa, 1973
Creative writing, poetry

Virginia Bururs, 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. Cames, 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 Cañada, Assistant Professor
Ph.D., 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 Cañada, 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 Chalken, 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
Ph.D., 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 Cornelson
Ph.D., Courtauld Institute of Art, University of London, 1998
Italian Renaissance Art

Catherine A. Cornell, 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
Licenciado, 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 Díaz, 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 politics, 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 Pittsburgh, 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
College of Arts and Sciences

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, Catalán 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-Th/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 Frantis, 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

Mynna 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

Casaree Gibson, Assistant Professor of African American Literature
Ph.D., Purdue University, 2015

Mark A. Ginsberg, Adjunct Associate Professor
Ph.D., Southern Illinois University, 1975
French

Hope Gildeden , Professor
Ph.D., Columbia University, 1976

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 aggregation, 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

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**College of Arts and Sciences**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gerald R. Greenberg, Associate Professor</td>
<td>Associate Dean, Ph.D., Cornell University, 1985, Russian, Slavic linguistics</td>
</tr>
<tr>
<td>Roger P. Greenberg, Adjunct Professor</td>
<td>Ph.D., Syracuse University, 1968</td>
</tr>
<tr>
<td>Philip S. Griffin, Professor</td>
<td>Ph.D., University of Minnesota, 1982 Probability</td>
</tr>
<tr>
<td>Erika Haber, Associate Professor</td>
<td>Ph.D., University of Michigan, 1993 Russian language and literatures</td>
</tr>
<tr>
<td>Rania Habib, Associate Professor</td>
<td>Ph.D., University of Florida, 2008 Languages, Literatures and Linguistics; Linguistics, Arabic, Middle Eastern Studies</td>
</tr>
<tr>
<td>Brooks Haxton, Professor</td>
<td>Ph.D., University of Pennsylvania, 1968 Physiological ecology and comparative physiology, emphasizing energetic relationships in small mammals and birds</td>
</tr>
<tr>
<td>Sarah Hall, Assistant Professor</td>
<td>Ph.D., New York University, 2002 Film, documentary, visual culture, LGBT studies</td>
</tr>
<tr>
<td>Roger Hallas, Associate Professor, English</td>
<td>M.A., Syracuse University, 1981 Creative writing, poetry</td>
</tr>
<tr>
<td>Mark Heller, Professor</td>
<td>Ph.D., Syracuse University, 1984 Metaphysics, epistemology</td>
</tr>
<tr>
<td>H. Ernest Hemphill, Associate Professor Emeritus</td>
<td>Ph.D., Cornell University, 1967 Microbiology, microbial genetics</td>
</tr>
<tr>
<td>James A. Hewett, Associate Professor</td>
<td>Ph.D., Michigan State University, 1991 central nervous system, inflammation, arachidonic acid metabolism, therapeutics, gene expression, cell culture</td>
</tr>
<tr>
<td>Sandra J. Hewett, Beverly Petterson Bishop</td>
<td>Professor of Neuroscience, Ph.D., Michigan State University, 1992 Mechanisms underlying cell death in the central nervous system: the interplay between excitotoxicity and inflammation</td>
</tr>
<tr>
<td>Margaret Himley, Professor</td>
<td>Ph.D., University of Illinois, Chicago, 1983 Composition and critical pedagogy, curriculum design, LGBT studies and queer rhetoric, phenomenological theories of children and childhood</td>
</tr>
<tr>
<td>Joseph T. Himmelsbach, Adjunct Associate Professor</td>
<td>Ph.D., Syracuse University, 1972, Ph.D., Cornell University, 2006 Geomorphology, sedimentary geology, tectonics</td>
</tr>
<tr>
<td>Gregory D. Hoke, Associate Professor</td>
<td>Ph.D., Cornell University, 2006 Geomorphology, sedimentary geology, tectonics</td>
</tr>
<tr>
<td>Richard Holmes, Research Assistant Professor</td>
<td>Ph.D., University of Maryland, 1985 Elementary particles, experiment</td>
</tr>
<tr>
<td>Jeehee Hong, Assistant Professor</td>
<td>Ph.D. University of Chicago, 2008 Art of China; Arts of East Asia</td>
</tr>
<tr>
<td>Peter D. Horn, Assistant Professor</td>
<td>Ph.D., Rice University, 2009 Knot concordance and Heegaard Floer homology</td>
</tr>
<tr>
<td>James L. Houglund, Assistant Professor</td>
<td>Ph.D., University of Chicago, 2005 Bioorganic chemistry; biochemistry; enzymology; substrate selection and molecular recognition in protein posttranslational modification</td>
</tr>
<tr>
<td>Marc W. Howard, Associate Professor</td>
<td>Ph.D., University of Chicago, 1999 Human memory, cognitive neuroscience, mathematical and computational modeling</td>
</tr>
<tr>
<td>Rebecca Moore Howard, Professor</td>
<td>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</td>
</tr>
<tr>
<td>William J. Hoyer, Professor</td>
<td>Ph.D., West Virginia University, 1972 Life-span developmental psychology, learning and memory, cognitive aging, and aging</td>
</tr>
<tr>
<td>Wu -Teh Hsiang, Emeritus</td>
<td>Ph.D., University of Pennsylvania, 1977 Differential geometry and differential equations</td>
</tr>
<tr>
<td>Jay Hubisz, Associate Professor</td>
<td>Ph.D. Cornell University, 2006 Theoretical particle physics, cosmology</td>
</tr>
<tr>
<td>Bruce S. Hudson, Professor</td>
<td>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</td>
</tr>
<tr>
<td>Marsha A. Hunt, Part-time Instructor</td>
<td>J.D., Syracuse University, 1987</td>
</tr>
<tr>
<td>Sydney Hutchinson, Assistant Professor</td>
<td>Ph.D. New York University, 2008 Ethnomusicology</td>
</tr>
<tr>
<td>Richard Ingersoll, Ph.D.</td>
<td>Ph.D., University of California; Berkeley 16th century Italian architecture and survey of Italian urbanism.</td>
</tr>
<tr>
<td>Linda C. Ivan, Professor</td>
<td>Ph.D., Harvard University, 1997 Evolutionary paleoecology, paleontology, paleoclimatology, stable isotope paleobiology</td>
</tr>
<tr>
<td>Tadeusz Iwaniec, John Raymond French</td>
<td>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.</td>
</tr>
<tr>
<td>Mary M. Jackowski, Adjunct Assistant Professor</td>
<td>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</td>
</tr>
<tr>
<td>Jean Jonassaint, Professor</td>
<td>Ph.D., Universite de Montreal (Canada), 1990 Francophone studies, Haitian novel</td>
</tr>
<tr>
<td>Harold Jones, Emeritus</td>
<td>Ph.D., Princeton University, 1968 Spanish golden age literature</td>
</tr>
<tr>
<td>Randall S. Jorgenson, Associate Professor</td>
<td>Ph.D., University of Kansas, 1983 Health psychology, effects of personality coping, stress and heredity on cardiovascular reactivity</td>
</tr>
<tr>
<td>Christopher Junium, Assistant Professor, Earth Sciences</td>
<td>Ph.D., Penn State University, 2010 Paleoclimatology, paleoceanography, geobiology, and stable isotope and organic geochemistry</td>
</tr>
<tr>
<td>Tara Kahan, Assistant Professor</td>
<td>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</td>
</tr>
<tr>
<td>Bette Kahler, Instructor</td>
<td>M.Mus., Syracuse University, 1971 Organ performance and instruction, music history and theory</td>
</tr>
<tr>
<td>Michael L. Kalish, Professor</td>
<td>Ph.D., Brown University, 1979 Organic chemistry, organic synthesis, emphasizing methods and strategies for the preparation of biologically active natural products and electro-optical materials</td>
</tr>
<tr>
<td>Mary Karr, Jesse Truesdell Peck Professor of English Literature</td>
<td>Ph.D., State 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.</td>
</tr>
<tr>
<td>James Kallmerten, Professor</td>
<td>Ph.D., University of California, 1993, Ph.D., State University of New York at Albany, 1977 Structural geology and tectonics</td>
</tr>
<tr>
<td>Tasnim R. Kassam, Associate Professor</td>
<td>Ph.D., McGill University, 1993 History of religions, specializing in Islamic traditions and religions of South Asia</td>
</tr>
</tbody>
</table>
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

Jakin Kornfliet, 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 Kovaliev, Assistant Professor
Ph.D. Washington University, 2005
geometric function theory

Thomas J. Krisher, Adjunct Assistant Professor
Psy.D., Hahnemann University, 1986

Robert Kuehnle, 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 Perturbation 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 ordered 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 O. Masingila, Laura J. and L. Douglas Meredith 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
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 sciences, formation of solid state complexes, forensic science, solar energy conversion chemistry, formation of solid state materials, nanostructures and nonlinear optical materials

Robert R. 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
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Biochemistry, biochemical methods in bioforensic sciences, formation of solid state complexes, forensic science, solar energy conversion chemistry, formation of solid state materials, nanostructures and nonlinear optical materials

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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

Matthew 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 Iowa, 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
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

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 Wyile, 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, Chair, Chemistry
Ph.D., Columbia University, 1971
Inorganic chemistry, coordination complexes, polyoxometalates, microporous materials, technetium-based radiopharmaceuticals
AAS 500 - Selected Topics
College of Arts and Sciences
Repeatable
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.

AAS 501 - African American Sociological Practice: 1900-45
College of Arts and Sciences
Repeatable
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
Repeatable
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
Repeatable
3 credit(s) Irregularly
Crosslisted with: HST 510

AAS 512 - African American Women's History
College of Arts and Sciences
Repeatable
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
Repeatable
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-interprets 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
Repeatable
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
Repeatable
3 credit(s) At least 1x 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.

AAS 580 - International Course
College of Arts and Sciences
Repeatable
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.
3 credit(s) At least 1x fall or spring
Effects of global encounters on African, African Caribbean, and African American societies examined.

AAS 620 - Black Women Writers
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Writers whose work creates, expands, and engages knowledge of Pan Africanism.
Repeatable

AAS 625 - “Revolt of the Black Athlete”: Africana Studies and the History and Culture of Sport
College of Arts and Sciences
3 credit(s) Every semester
Double Numbered with: AAS 425
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 626 - African American Urban History
College of Arts and Sciences
3 credit(s) Every semester
Crosslisted with: HST 626
Double Numbered with: AAS 426
This seminar will examine the complex and varied Black urban experiences in the 20th and 21st centuries from the 1890s to the present.

AAS 627 - New York City: Black Women Domestic Workers
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 627, WGS 627
Double Numbered with: AAS 427
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 631 - Seminar in African Drama and Theater
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Exploration of African performance art forms existing since antiquity. Selected contemporary written drama texts. Includes student performance.

AAS 634 - Underground Railroad
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Crosslisted with: ANT 694, HST 634
Double Numbered with: AAS 434
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 645 - The Caribbean: Sex Workers, Transnational Capital, and Tourism
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 645, WGS 645
Double Numbered with: AAS 445
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 670 - 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

AAS 671 - Caribbean Intellectual Thought
College of Arts and Sciences
3 credit(s) Irregularly
Analysis of principle thinkers who have influenced the philosophy and intellectual culture of the region.

AAS 681 - Comparative State, Society Relations
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: PSC 681
Conceptual, methodological, and theoretical tools in comparing state, society relations, and their political and socioeconomic outcomes in the Pan African world and the rest of the world.

AAS 690 - 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

AAS 700 - Seminar in African American Studies
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Advanced interdisciplinary inquiry into critical areas of intellectual and research interests in relation to black experience in the United States. Students are required to develop major research hypotheses around themes of black experience.
Repeatable

AAS 731 - Militarism and Transformation in South Africa
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Issues of militarism in political process in Southern Africa in last 15 years. Understanding background which unleashed war, destabilization, and violence in region.

AAS 757 - Black Feminist Theories
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 757
Explores historical backgrounds and contemporary expressions of Black feminist thought around the globe to broaden our knowledge of feminist theory. We take an interdisciplinary approach to Black feminist theory that crosses genres and disciplines.

AAS 765 - Readings and Research in African History
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Crosslisted with: HST 765
Readings and research on a topic or theme in African History of the instructor’s choosing.

AAS 997 - Master’s Thesis
College of Arts and Sciences
6-9 credit(s)
Repeatable 1 time(s), 18 credits maximum

Arts Leadership Administration

ALP 600 - 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

ALP 601 - Entrepreneurship and Leadership in the Arts
College of Arts and Sciences
College of Arts and Sciences

3 credit(s) Irregularly
Integrates fields of arts and culture with business and administration. Introduces disciplines including: leadership, strategic planning, structuring, budgeting, financial analysis, fundraising, community development, board development, volunteer management, marketing, issues of technology in the arts.

ALP 603 - Technology and the Arts
College of Arts and Sciences
3 credit(s) Irregularly
Demonstrates how technology is central to managing, recording, marketing, promoting and defining cultural organizations. Technology has changed the nature of arts organizations. Learn about technologies that are changing the industry, how that technology is implemented, and implications for management of cultural organizations.
PREREQ: ALP 601

ALP 610 - Arts Leadership, Lecture Series/Practicum Immersion
College of Arts and Sciences
3 credit(s) Irregularly
Ten-day arts immersion trip to New York City or other major cultural center. Arts leaders will explore government policy, arts programming and education, marketing, public relations, fund development and fiscal and board management, arts law, strategic planning, organizational designs and approaches.
PREREQ: ALP 601

ALP 612 - Arts Entertainment and the Law
College of Arts and Sciences
3 credit(s) Irregularly
Introduction to the American legal system, especially in relationship to the arts and entertainment industries, addressing legal issues in copyright, first Amendment, trademark, publicity, and contract matters, informing the interaction between arts leaders and counsel.

ALP 615 - Arts Immersion in a Global Market
College of Arts and Sciences
3 credit(s) Irregularly
Examine museums, exhibitions, art galleries, artists' studios as spaces within which the global currency of artistic production has been created, validated and reinvented. Offered abroad during Maymester.
PREREQ: ALP 601

ALP 690 - 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

ALP 701 - Arts Administration Internship & Capstone Project
College of Arts and Sciences
3 credit(s) Irregularly
Capstone experiences for the Arts Leadership program. Prepare management analysis and strategic plan for arts organization. Prepare and implement plan for original strategic project as part of a mentored internship.
PREREQ: ALP 601, ALP 603, ALP 610, AND ALP 612

Anthropology

ANT 553 - Women and Social Change
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Croslisted 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
Croslisted 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 620 - Language Training in Preparation for Research Using Arabic
College of Arts and Sciences
3 credit(s)
Language training to prepare students to conduct research in areas that require knowledge of Arabic.
Repeatable 3 time(s), 12 credits maximum

Biochemistry

BCM 630 - 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 430
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 677 - Proteins and Nucleic Acids Lab
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Croslisted with: CHE 677
Double Numbered with: BCM 477
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.

BCM 678 - Perspectives in Biochemistry
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Croslisted with: CHE 678
Survey of Biochemistry with emphasis on the unifying concepts of Chemistry and Biology, requiring a graduate-level background in science.

BCM 684 - Biomolecular Modeling
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: BCM 484
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.

Biology

BIO 501 - Biology of Cancer
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
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 in behavior. Additional work required of graduate students.

**BIO 615 - Conservation Biology**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Double Numbered with: BIO 415  
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.

**BIO 616 - Biology of Aging**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 416  
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.

**BIO 624 - Readings in Neuroscience**  
*College of Arts and Sciences*  
0-3 credit(s) Irregularly  
Crosslisted with: BEN 613, CSD 753, NEU 613, PSY 778  
A literature-based team-taught course focusing on in depth discussions of classical or recent papers of exceptional import to neuroscience. Students will complete weekly readings assigned by faculty and participate in a 3-hr/wk group facilitated discussion

**BIO 625 - Interdisciplinary Methods of Neuroscience**  
*College of Arts and Sciences*  
0-3 credit(s) Irregularly  
Crosslisted with: BEN 614, CSD 754, NEU 614, PSY 779  
A practical interdisciplinary survey course whereby neuroscience faculty introduce students to a wide array of methodologies, including molecular, cellular, developmental, systems, behavioral, and cognitive neuroscience approaches to investigate basic, pre-clinical, translational, and clinical questions to unravel the relationship between brain and behavior.

**BIO 635 - Physical Cell Biology**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring

Crosslisted with: BEN 635, CEN 635, CHE 635, PHY 635  
This interdisciplinary class for science and engineering students provides an introduction to the quantitative description of biological systems and processes. The focus is on the biological and physical aspects of structure and function of cells and their subsystems.

**BIO 637 - Seminar in Developmental Neuroscience**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 437  
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.

**BIO 638 - Open Problems in Soft Interfaces**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: BEN 638, CEN 638, CHE 638, PHY 638  
In this seminar course on soft and biological materials and interfaces, teams from science and engineering will identify, discuss and assess current articles from the literature. Writing skills related to publishing peer-reviewed research are introduced.

**BIO 639 - Seminar in Ecosystem Ecology**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Double Numbered with: BIO 439  
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.

**BIO 641 - Seminar in Infectious Diseases**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 441  
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 642 - Seminar in Model Organism Genetics**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring
Introduces students to influential genomic studies.

**BIO 643 - Seminar in Epigenetics**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 443  
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.

**BIO 644 - Seminar in Neurotoxicology**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 444  
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.

**BIO 650 - Seminar in Evolutionary Genetics**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Double Numbered with: BIO 450  
Topics relating to the fundamental principles underlying the evolution and genetics of complex traits. Current and/or classic examples from the primary research literature will be chosen for discussions. Additional work is required of graduate students.

**BIO 651 - Ecology**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Double Numbered with: BIO 451  
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 656 - Seminar in Human Disease Genomics**  
*College of Arts and Sciences*  
3 credit(s)  
Double Numbered with: BIO 456  
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.

**BIO 657 - Principles of Human Toxicology**  
*College of Arts and Sciences*  
3 credit(s)  
Double Numbered with: BIO 457  
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.

**BIO 658 - Seminar in Animal Communication**  
*College of Arts and Sciences*  
3 credit(s)  
Double Numbered with: BIO 458  
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.

**BIO 659 - Plants & People**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Double Numbered with: BIO 459  
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.

**BIO 662 - Molecular Genetics**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 462  
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, 327

**BIO 663 - Molecular Biotechnology**  
*College of Arts and Sciences*  
4 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 463  
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, 327

**BIO 664 - Applied Biotechnology**  
*College of Arts and Sciences*  
4 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 464  
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, 327

**BIO 665 - Molecular Biology Laboratory**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 465  
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, 327

**BIO 666 - Science of Countering Weapons of Mass Destruction**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Crosslisted with: FSC 669  
Double Numbered with: BIO 469  
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 672 - Advanced Light Microscopy**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: FSC 672  
Double Numbered with: BIO 472  
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.

**BIO 675 - Biochemistry Laboratory**  
*College of Arts and Sciences*  
4 credit(s) At least 1x fall or spring  
Double Numbered with: BIO 475
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 is required of graduate students.

**PREREQ:** BIO 326, BIO 327

**COREQ:** BIO 575

**BIO 676 - Cold Cases**
*College of Arts and Sciences*

3 credit(s) Odd academic yr e.g. 2007-8  
Crosslisted with: FSC 676  
Double Numbered with: BIO 476

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 688 - Biological Literature**
*College of Arts and Sciences*

1-3 credit(s) Every semester

Lectures and library problems designed to acquaint student with reference sources. Technique of searching scientific literature and preparation of reports using such reference material. Also open to seniors.

Repeatable

**BIO 690 - 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 in the department.

Repeatable

**BIO 787 - Graduate Seminar in Functional Genomics**
*College of Arts and Sciences*

0-2 credit(s) Irregularly

Students review, critically evaluate, and present various topics related to genomic methods used for analysis of biological processes in a variety of model organisms.

Repeatable 1 time(s), 2 credits maximum

**BIO 791 - Graduate Seminar in Species Interactions**
*College of Arts and Sciences*

0-2 credit(s) Irregularly

Selected topics dealing with ecological and evolutionary perspectives of species interactions. Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class.

Repeatable

**BIO 792 - Animal Ecology & Behavior**
*College of Arts and Sciences*

0-3 credit(s) Irregularly

Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class.

Repeatable

**BIO 793 - Plant Ecology**
*College of Arts and Sciences*

0-2 credit(s) Irregularly

Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class.

Repeatable

**BIO 795 - Speciation**
*College of Arts and Sciences*

0-2 credit(s) Irregularly

Students review, critically evaluate, and summarize recent literature on given topics. The summaries are presented and discussed in class.

Repeatable

**BIO 797 - Seminar: Topics in Evolution**
*College of Arts and Sciences*

0-2 credit(s) Irregularly

Sexual selection and conflict, parental care, social evolution, speciation, morphological evolution. Critically evaluate and discuss recent historical and classical literature on the given topics.

Repeatable

**BIO 799 - Dissertation**
*College of Arts and Sciences*

1-15 credit(s) Every semester

Repeatable

**CAS 611 - Living in a Global Environment**
*College of Arts and Sciences*

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

Double Numbered with: CAS 411

Analysis of practical and theoretical components in living and interacting with people of different countries and cultures. Additional work required of graduate students.

**CAS 713 - Proposal Writing**
*College of Arts and Sciences*

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

Crosslisted with: ANT 713

A two-week workshop during which graduate students draft a proposal for dissertation or other research; includes extensive evaluation of ongoing drafts.

**Composition and Cultural Rhetoric**

**CCR 611 - Composition Histories/Theories**
*College of Arts and Sciences*

3 credit(s) Even Academic Yr e.g. 2004-5

Examines the histories of composition studies. Analyzes the institutional, political and social forces influencing the theories and practices of composition.

**CCR 620 - Graduate Readings**
*College of Arts and Sciences*

1-4 credit(s) Every semester

Repeatable 3 time(s), 4 credits maximum

**CCR 631 - Contemporary Rhetorics**
*College of Arts and Sciences*

3 credit(s) Even Academic Yr e.g. 2004-5

Surveys and situates histories and theories of contemporary rhetorical studies. Examines difference and power as rhetoric is practiced across cultures and publics.

**CCR 632 - Studies in Writing Pedagogy**
*College of Arts and Sciences*

3 credit(s) Even Academic Yr e.g. 2004-5

Explores research, theory, politics, and practices of writing pedagogies and curricula. Focuses on historical and institutional contexts, theories of language use, questions of difference, and controversies.

**CCR 633 - Writing, Rhetorics and Technologies**
*College of Arts and Sciences*

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

Explores histories of and recent developments in communication and information technologies, particularly their rhetorical, cultural, and pedagogical implications

**CCR 634 - Ancient Rhetorics**
*College of Arts and Sciences*

3 credit(s) Even Academic Yr e.g. 2004-5

Surveys and situates ancient rhetorics in their social, political and global contexts. Introduces rhetorical historiography.
College of Arts and Sciences

CCR 635 - Advanced Research Practices
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Surveys research methods and methodologies. Focuses on reading research rhetorically, crafting researchable questions, and designing research studies.

CCR 636 - Feminist Rhetoric(s)
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: CRS 636, 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.

CCR 638 - 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.

CCR 651 - Language and Literacy
College of Arts and Sciences
3 credit(s) Irregularly
Language and literacy viewed from cognitive, social, historical, political, compositionist, and literary perspectives. Institutional practices of literacy and the role of language and literacy in identity construction. Language variation, language protectionism, and pluralistic cultural literacy.

CCR 711 - Advanced Theories and Philosophies of Rhetoric
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Current issues in rhetorical theory and its application to the study of writing and written discourse. Emphasizes definitions and functions of theory, the formation of debates and controversies, relations of theory to practice.

CCR 712 - Advanced Theories and Philosophies of Composition
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Current theories and major theorists in composition studies. Formulating critical problems that organize debate. Definition and functions of theory, relations to practice, rhetorical processes of scholarship.

CCR 732 - Advanced Studies in Writing Curriculum and Pedagogy
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Integrates study of historiography and cultural rhetoric. Investigates historical rhetorical practices, their construction and functions in social life, their documentation through archival research. Includes wide range of cultural and textual forms.

CCR 760 - Advanced Studies in Composition & Cultural Rhetoric: Selected Topics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Seminar on topics in composition or cultural rhetoric. Repeatable

CCR 820 - Advanced Graduate Readings
College of Arts and Sciences
1-4 credit(s) Irregularly
Repeatable 3 time(s), 4 credits maximum

CCR 887 - Doctoral Readings
College of Arts and Sciences
1-3 credit(s) At least 1x fall or spring
Advanced readings and seminar discussion in preparation for doctoral qualifying examination.

CCR 999 - Dissertation
College of Arts and Sciences
1-15 credit(s) Irregularly
Repeatable 14 time(s), 15 credits maximum

Chemistry

CHE 546 - Molecular Spectroscopy and Structure
College of Arts and Sciences
1-9 credit(s) At least 1x 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

CHE 611 - Inorganic Chemistry
College of Arts and Sciences
Recent advances in inorganic chemistry will be presented and discussed. Individual topics for the various modules of the course will be taught by experts in the field and will vary from year to year. Modular titles are: 624M Inorganic Chemistry of Main Group Elements 624M Materials Chemistry/ Nanoscience and Nanotechnology 624M Biomedical Applications in Inorganic Chemistry 624M Organometallic and Main Group Chemistry Repeatable 2 time(s), 3 credits maximum

CHE 625 - Crystallography
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: CHE 425
Modern methods of structure determination using x-ray crystallography. Symmetry and space groups will be developed, the mathematical foundation of practical crystallography. Model structures will be determined. Additional work required of graduate students.

CHE 626 - Organometallic Chemistry
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Topics in current organometallic and organotransition metal chemistry emphasizing structure, bonding, properties, reactions, and reaction mechanisms of organometallic species including stoichiometric and catalytic reagents in asymmetric and related pathways.

CHE 627 - Organic Chemistry of Biological Molecules
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CHE 427
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.

CHE 634 - Advanced Chemical Instrumentation and Analytical Techniques
College of Arts and Sciences
3 credit(s) Irregularly
Fundamentals of instrumentation, spectral data analysis, chemometrics, and analytical applications in various areas of molecular spectroscopy such as ultraviolet-visible absorption and fluorescence, electronic and vibrational circular dichroism, surface laser spectroscopy, and laser Raman scattering.

CHE 635 - Physical Cell Biology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 635, BIO 635, CEN 635, PHY 635
This interdisciplinary class for science and engineering students provides an introduction to the quantitative description of biological systems and processes. The focus is on the biological and physical aspects of structure and function of cells and their subsystems.

CHE 636 - Advanced Physical Chemistry
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CHE 436
Applications of thermodynamics and quantum mechanics to chemical bonding, molecular properties, chemical kinetics, structure of matter, spectroscopy.

CHE 637 - Chemistry at the Interface:Biomaterials, Bioorganic & Bioinorganic Chemistry
College of Arts and Sciences
1 credit(s) Irregularly
Contemporary topics in chemistry as applied to life sciences, with three one-credit sections on biomaterials, bioorganic, and bioinorganic chemistry. Emphasis on recent original research journal publications, as well as on unsolved problems in chemistry and biology. 637M Biomaterials 637M Bioorganic Chemistry 637M Bioinorganic Chemistry Repeatable 2 time(s), 3 credits maximum

CHE 638 - Open Problems in Soft Interfaces
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 638, BIO 638, CEN 638, PHY 638
In this seminar course on soft and biological materials and interfaces, teams from science and engineering will identify, discuss and assess current articles from the literature. Writing skills related to publishing peer-reviewed research are introduced.

CHE 645 - Quantum Mechanics in Chemistry
College of Arts and Sciences
3 credit(s) Irregularly
The fundamentals of quantum mechanics with application to simple systems, complex atoms, and molecules.

CHE 655 - Quantum Chemistry & Advanced Quantum Mechanics
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Fundamentals of quantum chemistry, molecular bonding (e.g., MO-SCF, C.I.), time-dependent phenomena, scattering, density matrices.

PREREQ: CHE 645
CHE 656 - Chemical Thermodynamics  
*College of Arts and Sciences*  
3 credit(s) Irregularly  

CHE 666 - Statistical Mechanics  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Quantum-statistical treatment in terms of canonical and grand canonical ensembles of systems of noninteracting and interacting particles. Chemical applications of statistical thermodynamics, elementary theory of transportation processes, fluctuations, and irreversible processes.

CHE 674 - Structural and Physical Biochemistry  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: CHE 474  
Thermodynamics, kinetics, and bonding associated with biological molecules. The course also utilizes computer-based molecular modeling tools for analyzing the structures of drugs, proteins, and nucleic acids. Additional work required of graduate students.

CHE 675 - Advanced Organic Chemistry  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  

CHE 676 - Introduction to Organic Synthesis: Methodology  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Functional group transformations and carbon-carbon bond-forming reactions. Basic design strategies and advanced synthetic techniques including protection and functional group equivalency.

CHE 677 - Proteins and Nucleic Acids Lab  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: BCM 677  
Double Numbered with: CHE 477  
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.

CHE 678 - Perspectives in Biochemistry  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: BCM 678  
Survey of Biochemistry with emphasis on the unifying concepts of Chemistry and Biology, requiring a graduate-level background in science.

CHE 685 - Organic Mechanisms  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  

CHE 686 - Advanced Organic Synthesis: Design  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
The design, planning, and execution of multi-step organic syntheses. Asymmetric, enzymatic, and solid-phase synthetic methods. Retrosynthetic analysis and combinatorial techniques.

CHE 690 - 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 997 - Masters Thesis  
*College of Arts and Sciences*  
1-15 credit(s) Every semester  
Repeatable.

CHE 999 - Doctoral Dissertation  
*College of Arts and Sciences*  
1-15 credit(s) Every semester  
Repeatable.

Chinese  
CHI 620 - Language Training in Preparation for Research Using Chinese  
*College of Arts and Sciences*  
3 credit(s)  
Language training to prepare students to conduct research in areas that require knowledge of Chinese. Repeatable 3 time(s), 12 credits maximum.

Communication Sciences and Disorders  
CSD 609 - Cognitive Neuroscience of Speech and Language  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered 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.

CSD 611 - Motor Speech Disorders  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Neuroanatomy, neurophysiology of brain motor systems. Characteristics, assessment and treatment of the dysarthrias and apraxias of speech in children and adults due to congenital or acquired etiologies, including degenerative diseases. Application of basic principles of motor learning in treatment. 
PREREQ: CSD 315 OR CSD 615 AND CSD 409 OR CSD 609.

CSD 612 - Genetics, Cleft Palate and Craniofacial Disorders  
*College of Arts and Sciences*  
3 credit(s) Only during the summer  
PREREQ: CSD 315.

CSD 615 - 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 315  
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.

CSD 616 - Introduction to Applied Phonetics  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: CSD 316  
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 618 - Dysphagia
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Anatomy and physiology of normal and disordered swallowing. Description of swallowing disorders associated with numerous medical conditions. Assessment and treatment of swallowing disorders in adults and children.
PREREQ: CSD 609 OR CSD 615

CSD 622 - Development of Speech and Language
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 422
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 623 - Language Disorders of Early Childhood
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Assessment and intervention strategies for birth to 5 years in home, clinic, and school. Presymbolic communication, precursors to written language, individual/ cultural differences, social, cognitive, familial, community factors; specific language impairment, pervasive developmental disorders, cognitive impairments.

CSD 624 - Clinical Techniques - Language Disabilities of Early Childhood
College of Arts and Sciences
1 credit(s) At least 1x fall or spring
PREREQ: CSD 650

CSD 625 - Stuttering
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 425
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 616 AND CSD 622

CSD 627 - Speech and Language Disorders in Children
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 427
PREREQ: CSD 616

CSD 629 - Basic Clinical Audiology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 429

CSD 635 - Aural Rehabilitation
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 435
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 637 - Instrumentation for Speech and Hearing
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Basic function and use of instrumentation, including calibration standards and methods of calibration for equipment used in clinical evaluation and treatment. Includes physical characteristics and measurement of acoustic and non-acoustic stimuli, basic principles of electric circuits, and bioelectric safety.

CSD 638 - Clinical Phonology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Overview of principles and concepts of phonology; applications of various theories of phonology in clinical settings. Focus on both assessment and treatment of phonological disorders. Practice with formal and informal phonological analysis procedures.
PREREQ: CSD 616, CSD 627

CSD 645 - Speech Science
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 345
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.

CSD 646 - Augmentative and Alternative Communication Systems
College of Arts and Sciences
1 credit(s) At least 1x fall or spring
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.

CSD 650 - Clinical Classroom Practicum
College of Arts and Sciences
0-4 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.
COREQ: CSD 622 AND CSD 651
Repeatable

CSD 651 - Clinical Methods in Speech-Language Pathology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 451
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.

CSD 657 - Voice Disorders
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Characteristics, assessment and treatment of voice disorders in adults and children. Anatomy and physiology of the vocal mechanism, functional, organic and neurological dysphonias, resonance
disorders and laryngectomy.
PREREQ: CSD 615, CSD 645

CSD 658 - Auditory Anatomy and Physiology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Anatomy and physiology of outer, middle, and inner ear; central auditory mechanisms in normal systems. Underlying systems and signals theory will be used to explain response measurement techniques and auditory response analysis.

CSD 659 - Introduction to Research in Audiology and Speech Language Pathology
College of Arts and Sciences
1 credit(s) At least 1x fall or spring
Guided instruction on how to critically read a research article, how to effectively search the literature and libraries for original sources; provide a forum for peer discussion of research articles.

CSD 661 - Advanced Clinical Audiology I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Rationale and development of clinical tests of auditory function. Pure tone and speech audiometry, masking, acoustic impedance and special auditory tests.

CSD 662 - Pediatric Audiology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring

CSD 663 - Auditory Evoked Potentials
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Foundational knowledge for objective physiological measurement of the auditory system using auditory evoked potentials. Emphasis on understanding principles underlying the recording, analyzing and interpreting electrophysiological responses from the peripheral and central auditory system.
PREREQ: CSD 661
COREQ: CSD 658

CSD 665 - Medical Audiology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Anatomical and physiological defects that characterize disorders of the middle ear, inner ear, auditory nerve, and central auditory nervous system. Psychoacoustic manifestations of auditory lesions. Familiarization with medical and surgical treatment of otologic disorders.
PREREQ: CSD 429/CSD 629

CSD 666 - Speech Perception & Acoustics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Auditory perception and the psychological correlates of the physical aspects of sound, acoustic phonetics, speech perception in normal-hearing and hearing-impaired individuals.
PREREQ: CSD 325

CSD 667 - Rehabilitative Audiology
College of Arts and Sciences
3 credit(s) Only during the summer
Demographics of hearing impairment; speech perception of hearing-impaired people; principles of amplification and other sensory prostheses; manual communication; speech reading; hearing handicap scales; psychosocial aspects of hearing impairment; special needs of the geriatric client.

CSD 668 - Cerumen Management
College of Arts and Sciences
1 credit(s) Only during the summer
Ear canal examination, cerumen and the canal secretory system, cerumen management, audiometric and immittance data, contraindications.

CSD 671 - Advanced Clinical Audiology II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Concepts and practice in screening and diagnostic audiology, including clinical decision analysis, otoacoustic emissions, wideband acoustic immittance, and clinical applications of auditory evoked potentials.

CSD 673 - Hearing Aids I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Historical development of hearing aids, electroacoustic measurements of hearing aids, compression technology and ear mold acoustics.

CSD 674 - Hearing Aids II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Strategies used to select and fit amplification for hearing impaired children and adults, subjective measure, monaural and binaural effects, and troubleshooting.
PREREQ: CSD 673

CSD 675 - Auditory Processing Disorders
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Focus on the identification and diagnosis of Central Auditory Processing Disorders through the use of case history/questionnaires, speech audiometric tests, non-verbal tests and electrophysiological measures.
PREREQ: CSD 661

CSD 677 - Speech-Language Pathology in School Settings
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: CSD 477
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 422/CSD 622

CSD 723 - Assessment of Children's Language
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Formal and informal assessment procedures for syntactic, semantic, and pragmatic aspects of oral and written language; computerized analysis of language samples; cognitive, social, familial, educational, psychometric, and multicultural factors in test interpretation and treatment efficacy.
PREREQ: CSD 422/CSD 622

CSD 725 - Neuropathologies of Language
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
PREREQ: CSD 315 OR CSD 615

CSD 726 - Neurogenic Communication Disorders I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
PREREQ: CSD 315 OR 615

CSD 727 - Neurogenic Communication Disorders II
College of Arts and Sciences
CSD 731 - Language Disorders in School-Age Children  
"College of Arts and Sciences"

CSD 732 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 733 - Language Disorders in School-Age Children  
"College of Arts and Sciences"

CSD 734 - Interdisciplinary Methods of Neuroscience  
"College of Arts and Sciences"

CSD 740 - Directed Research  
"College of Arts and Sciences"

CSD 741 - Classic Neuroimaging  
"College of Arts and Sciences"

CSD 742 - Directed Research  
"College of Arts and Sciences"

CSD 743 - Research Methods in Neuroscience  
"College of Arts and Sciences"

CSD 744 - Imaging Techniques in Neuroscience  
"College of Arts and Sciences"

CSD 745 - Imaging Techniques in Neuroscience  
"College of Arts and Sciences"

CSD 746 - Directed Research  
"College of Arts and Sciences"

CSD 747 - Directed Research  
"College of Arts and Sciences"

CSD 748 - Directed Research  
"College of Arts and Sciences"

CSD 749 - Directed Research  
"College of Arts and Sciences"

CSD 750 - Seminars in Speech-Language Pathology  
"College of Arts and Sciences"

CSD 751 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 752 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 753 - Readings in Neuroscience  
"College of Arts and Sciences"

CSD 754 - Interdisciplinary Methods of Neuroscience  
"College of Arts and Sciences"

CSD 755 - Readings in Neuroscience  
"College of Arts and Sciences"

CSD 756 - Directed Research  
"College of Arts and Sciences"

CSD 757 - Directed Research  
"College of Arts and Sciences"

CSD 758 - Directed Research  
"College of Arts and Sciences"

CSD 759 - Directed Research  
"College of Arts and Sciences"

CSD 760 - Directed Research  
"College of Arts and Sciences"

CSD 761 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 762 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

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CSD 766 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 767 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 768 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 769 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 770 - Directed Research  
"College of Arts and Sciences"

CSD 771 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 772 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 773 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 774 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 775 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 776 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 777 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 778 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 779 - Clinical Techniques - Language Disabilities of School Age Children  
"College of Arts and Sciences"

CSD 780 - Seminar in Audiology  
"College of Arts and Sciences"

CSD 781 - Hearing Conservation and Environmental Audiology  
"College of Arts and Sciences"

CSD 782 - Cochlear Implants  
"College of Arts and Sciences"

CSD 783 - Cochlear Implants  
"College of Arts and Sciences"

CSD 784 - Cochlear Implants  
"College of Arts and Sciences"

CSD 785 - Cochlear Implants  
"College of Arts and Sciences"

CSD 786 - Cochlear Implants  
"College of Arts and Sciences"

CSD 787 - Cochlear Implants  
"College of Arts and Sciences"

CSD 788 - Cochlear Implants  
"College of Arts and Sciences"

CSD 789 - Cochlear Implants  
"College of Arts and Sciences"

CSD 790 - Cochlear Implants  
"College of Arts and Sciences"

CSD 791 - Cochlear Implants  
"College of Arts and Sciences"

CSD 792 - Cochlear Implants  
"College of Arts and Sciences"

CSD 793 - Cochlear Implants  
"College of Arts and Sciences"

CSD 794 - Cochlear Implants  
"College of Arts and Sciences"

CSD 795 - Cochlear Implants  
"College of Arts and Sciences"

CSD 796 - Internship in Audiology  
"College of Arts and Sciences"

CSD 797 - Internship in Audiology  
"College of Arts and Sciences"

CSD 798 - Internship in Audiology  
"College of Arts and Sciences"

CSD 799 - Internship in Audiology  
"College of Arts and Sciences"

CSD 800 - Internship in Audiology  
"College of Arts and Sciences"

CSD 801 - Internship in Audiology  
"College of Arts and Sciences"

CSD 802 - Internship in Audiology  
"College of Arts and Sciences"

CSD 803 - Internship in Audiology  
"College of Arts and Sciences"

CSD 804 - Internship in Audiology  
"College of Arts and Sciences"

CSD 805 - Internship in Audiology  
"College of Arts and Sciences"

CSD 806 - Internship in Audiology  
"College of Arts and Sciences"

CSD 807 - Internship in Audiology  
"College of Arts and Sciences"

CSD 808 - Internship in Audiology  
"College of Arts and Sciences"

CSD 809 - Internship in Audiology  
"College of Arts and Sciences"

CSD 810 - Internship in Audiology  
"College of Arts and Sciences"

CSD 811 - Internship in Audiology  
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CSD 812 - Internship in Audiology  
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CSD 813 - Internship in Audiology  
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CSD 815 - Internship in Audiology  
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CSD 816 - Internship in Audiology  
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CSD 817 - Internship in Audiology  
"College of Arts and Sciences"

CSD 818 - Internship in Audiology  
"College of Arts and Sciences"

CSD 819 - Internship in Audiology  
"College of Arts and Sciences"

CSD 820 - Internship in Audiology  
"College of Arts and Sciences"

CSD 821 - Internship in Audiology  
"College of Arts and Sciences"

CSD 822 - Internship in Audiology  
"College of Arts and Sciences"

CSD 823 - Internship in Audiology  
"College of Arts and Sciences"

CSD 824 - Internship in Audiology  
"College of Arts and Sciences"

CSD 825 - Internship in Audiology  
"College of Arts and Sciences"

CSD 826 - Internship in Audiology  
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CSD 827 - Internship in Audiology  
"College of Arts and Sciences"

CSD 828 - Internship in Audiology  
"College of Arts and Sciences"

CSD 829 - Internship in Audiology  
"College of Arts and Sciences"

CSD 830 - Internship in Audiology  
"College of Arts and Sciences"

CSD 831 - Internship in Audiology  
"College of Arts and Sciences"

CSD 832 - Internship in Audiology  
"College of Arts and Sciences"

CSD 833 - Internship in Audiology  
"College of Arts and Sciences"

CSD 834 - Internship in Audiology  
"College of Arts and Sciences"

CSD 835 - Internship in Audiology  
"College of Arts and Sciences"

CSD 836 - Internship in Audiology  
"College of Arts and Sciences"

CSD 837 - Internship in Audiology  
"College of Arts and Sciences"

CSD 838 - Internship in Audiology  
"College of Arts and Sciences"

CSD 839 - Internship in Audiology  
"College of Arts and Sciences"

CSD 840 - Internship in Audiology  
"College of Arts and Sciences"
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

**EAR 601 - Hydrogeology**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: EAR 401  

**EAR 602 - Numerical Methods in Geosciences**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: EAR 402  
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.

**EAR 603 - Geomorphology**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: EAR 403  
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.

**EAR 604 - Advanced Structural Geology**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Double Numbered with: EAR 404  
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 605 - Global Change: Geologic Record**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: EAR 405  
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.

**EAR 606 - Reflection Seismology: Theory and Practice**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Double Numbered with: EAR 406  
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 607 - Climate Change and Human Origins**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Crosslisted with: ANT 639  
Double Numbered with: EAR 407  
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. Additional work required of graduate students.

**EAR 610 - 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 410  
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 611 - 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 612 - Water-Energy Seminar**  
*College of Arts and Sciences*  
1 credit(s) Every semester  
A forum for learning about and discussing research at the water-energy interface, to network with visiting professionals, and know others working in related fields. Participants review and discuss papers and host visiting lecturers.  
Repeatable 3 time(s), 4 credits maximum

**EAR 617 - Geochemistry**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: EAR 417  
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.  
PREREQ: EAR 314 AND CHE 107 AND 117

**EAR 618 - Petrology**  
*College of Arts and Sciences*  
4 credit(s) Upon sufficient interest  
Double Numbered with: EAR 418  
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.

**EAR 619 - Environmental Aqueous Geochemistry**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: EAR 419  
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 620 - Contaminant Hydrogeology**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Double Numbered with: EAR 420  
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: EAR 401

**EAR 624 - Paleoecology**  
*College of Arts and Sciences*
3 credit(s) Upon sufficient interest
PREREQ: EAR 325

EAR 629 - Topics in Paleobiology
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 429
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 630 - Topics in Thermochronology & Tectonics
College of Arts and Sciences
2 credit(s) Upon sufficient interest
Double Numbered with: EAR 430
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 631 - Plate Tectonics
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 431
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 333 AND PHY 212 AND MAT 296

EAR 632 - Seafloor Spreading and Oceanic Lithosphere
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 432
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 333

EAR 633 - Topics in Active Tectonics
College of Arts and Sciences
2 credit(s) Upon sufficient interest
Double Numbered with: EAR 433
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 635 - Geophysics
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 435
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: EAR 333 AND MAT 296

EAR 636 - Topics in Active Tectonics
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 433
Evolution of the Earth. Additional work required of graduate students.
PREREQ: EAR 333 OR EAR 431
Repeatable 2 time(s), 6 credits maximum

EAR 655 - Geochemical Patterns in the History of Earth and Life
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 455
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 417

EAR 660 - Advanced Hydrologic Field Methods
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Hands-on experience using current instrumentation and measurement techniques in hydrology. Emphasizing fundamental theory governing application, demonstrations of application from the literature and field experiments.
PREREQ: EAR 417

EAR 665 - Groundwater Modeling
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Fundamentals of groundwater and solute movement in the subsurface and how these processes are simulated by numerical finite-difference models. Topics include conceptual model development, boundary conditions, calibration and sensitivity analysis.
PREREQ: EAR 417

EAR 678 - Isotope Geology
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Isotope geochemistry is used in all branches of Earth Sciences. This course covers the following topics: Radioactive decay, Rb-Sr, Sm-Nd, and Lu-Hf isotope geochemistry; U-Pb geochronology, 14C dating; O, H, and C isotope geochemistry. Additional work required of graduate students.
PREREQ: EAR 478

EAR 683 - Departmental Colloquium
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: permission, in advance, of assigned instructor, department chair, or dean.
Repeatable

EAR 690 - Experience Credit
College of Arts and Sciences
1-6 credit(s) Every semester

EAR 692 - Departmental Colloquium
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: EAR 483
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 860 - Advanced Seminars in Geology
College of Arts and Sciences
1-3 credit(s) Upon sufficient interest
Current literature and problems in specialized fields of geology.
Repeatable

EAR 997 - Masters Thesis
College of Arts and Sciences
0-9 credit(s) Every semester
Repeatable

EAR 999 - Dissertation
College of Arts and Sciences
1-15 credit(s) Every semester
Repeatable

Economics

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 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 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 1x 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 311)

ECN 525 - Economics and Gender
College of Arts and Sciences
3 credit(s) At least 1x 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 556 - International Macroeconomics and Finance
College of Arts and Sciences
3 credit(s) At least 1x 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.
PREREQ: ENG 715

English

ENG 615 - Open Poetry Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Participants write original poems, receive each other's critiques, and revise.

ENG 617 - Open Fiction Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Participants write original stories, receive each other's critiques, and revise.

ENG 630 - Graduate Proseminar
College of Arts and Sciences
3 credit(s)
Introduction to a comprehensively defined field or period that places literary, cultural, and cinematic texts in historical and critical perspective.
Repeatable 10 time(s), 36 credits maximum

ENG 631 - Critical Theory
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Overview of major issues in critical theory: the debates over the understanding of meaning, subjectivity, textuality, and historicity. Required of all new M.A. and Ph.D. students.

ENG 650 - Forms
College of Arts and Sciences
3 credit(s) Every semester
Students in Forms courses will analyze assigned writings with the purpose of discovering the author's intent.
Repeatable 7 time(s), 24 credits maximum

ENG 715 - First Poetry Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
First poetry workshop in the M.F.A. creative writing program sequence. Intensive practice in the writing and criticism of poetry.

ENG 716 - Second Poetry Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Secondary poetry workshop in the M.F.A. program sequence.
PREREQ: ENG 715

ENG 717 - First Fiction Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
First fiction workshop in the M.F.A. creative writing program sequence. Intensive practice in the writing and criticism of fiction.

ENG 718 - Second Fiction Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Second fiction workshop in the M.F.A. program sequence.
PREREQ: ENG 717

ENG 719 - Third Poetry Workshop
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Third poetry workshop in the M.F.A. program sequence.
PREREQ: ENG 715, ENG 716
**College of Arts and Sciences**

**ENG 721 - Third Fiction Workshop**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Third fiction workshop in the M.F.A. program sequence.  
PREREQ: ENG 717, ENG 718

**ENG 730 - Graduate Seminar**  
*College of Arts and Sciences*  
3 credit(s)  
A study in a particular topic, genre, movement, or critical problem. Introductory background in the larger field or period of framing the seminar focus is assumed.  
Repeatable 10 time(s), 36 credits maximum

**ENG 799 - M.F.A. Essay Seminar**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
In this writing-intensive class M.F.A. students complete full length critical essays on major writers to demonstrate their mastery of: a) close reading, b) poetic or fictional technique, and c) essay writing.  
PREREQ: ENG 715 AND ENG 716 OR ENG 717 AND ENG 718

**ENG 990 - 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

**ENG 996 - Graduate Readings**  
*College of Arts and Sciences*  
3 credit(s)  
To be used for field exam study, and where necessary, study to meet language requirement. May be taken four times for credit.  
Repeatable 3 time(s), 12 credits maximum

**ENG 997 - Thesis**  
*College of Arts and Sciences*  
1-6 credit(s) Every semester  
Repeatable 10 time(s), 12 credits maximum

**ENG 999 - Dissertation**  
*College of Arts and Sciences*  
1-15 credit(s) Every semester  
Credit designated from time to time as the dissertation progresses. Maximum total of 30 credits.  
Repeatable 10 time(s), 15 credits maximum

**FRE 600 - Selected Topics**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Double Numbered with: FRE 407  
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 607 - French Libertine Fictions**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Double Numbered with: FRE 409  
French enlightenment literature and culture considered within the context of the French Revolution. Conducted in French. Additional work required of graduate students.

**FRE 611 - Moliere**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Double Numbered with: FRE 411  
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 612 - French Women Writers**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr. e.g. 2004-5  
Crosslisted 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.

**FRE 617 - “Impressions d’Afrique”: Caribbean Gazes**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Double Numbered with: FRE 417  
A study of African issues through the eyes of Francophone Caribbean writers and their texts. Conducted in French. Additional work required of graduate students.

**FRE 619 - 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 419  
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.
Forensic Science

FRE 620 - Language Training in Preparation for Research Using French
College of Arts and Sciences
3 credit(s)
Language training to prepare students to conduct research in areas that require knowledge of French.
Repeatable 3 time(s), 12 credits maximum

FRE 621 - Francophone African Criticism
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: FRE 421
Major trends in Francophone African literary criticism. Conducted in French. Additional work required of graduate students.

FRE 627 - The Renaissance Body
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FRE 427
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 631 - Montaigne and the New World of Renaissance Writing
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FRE 431
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.

FSC 606 - Advanced Forensic Science
College of Arts and Sciences
3 credit(s) Every semester
Double Numbered with: FSC 406
Selected areas of current interest in forensic science presented. The application of scientific methods and techniques to crime detection and the law.
PREREQ: CHE 113 OR CHE 106 OR CHE 109 OR BIO 121

FSC 631 - Statistics for Forensic Science
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 431
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 632 - Research and Career Resources
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Provides practical skills and resources for research and careers in forensic science. Effective and ethical research and literature interpretation, critical thinking skills, communication methods specific to forensic science and their potential discovery issues, trial procedures.

FSC 633 - Quality Assurance and Ethics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Application of the ISO standard for accredited forensic laboratories. Effective decision model; case studies; root cause analysis; corrective action; document control; method validation; roles of police, attorneys, forensic scientists; ethical issues in U.S. legal system.

FSC 635 - Medicolegal Death Investigation I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 435
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 636 - Medicolegal Death Investigation II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 436
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 637 - Medicolegal Death Investigation for Emergency Responders
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 437
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 640 - Special Topics in Advanced Forensics
College of Arts and Sciences
3 credit(s) Every semester
Double Numbered with: FSC 440
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 644 - Forensic Chemical Analysis
College of Arts and Sciences
4 credit(s) At least 1x fall or spring
Double Numbered 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 119; CHE 117 OR 139

FSC 651 - Forensic Pathology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 451
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 652 - Forensic Mental Health
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 452
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 653 - Forensic Toxicology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 453
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.
FSC 654 - Nuclear Forensics
College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: FSC 454
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 657 - Principles of Human Toxicology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: BIO 657
Double Numbered with: FSC 457
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 658 - Scientific Regulation and Compliance
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Basis for regulations and implications for different careers in complying with laws, regulations, guidelines and specifications relevant to businesses like pharmaceutical, biotechnology, research, forensic and government laboratories. Implications for not complying with regulations. Case studies.

FSC 661 - Firearms and Impressions Evidence
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 461
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 662 - Forensic Entomology
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: FSC 462
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 663 - Bloodstain Pattern Analysis
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 463
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 665 - Latent Prints
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 465
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 666 - Forensic Photography
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 466
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 668 - Crime Scene Investigation
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: FSC 468
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 669 - 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 669
Double Numbered with: FSC 469
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 671 - Firearms and Impressions Evidence II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Modeled after an internationally recognized firearms examiner training program. Students operate comparison microscopes, perform firearms comparisons, receive operability/armorer training, and view firearms manufacturing processes to understand the forensic identification of fired ammunition components.
PREREQ: FSC 661

FSC 672 - Advanced Light Microscopy
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: BIO 672
Double Numbered with: FSC 472
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.

FSC 676 - Cold Cases
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: BIO 676
Double Numbered with: FSC 476
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 690 - Independent Study
College of Arts and Sciences
1-6 credit(s) Upon sufficient interest
Repeatable

FSC 990 - Independent Study
College of Arts and Sciences
1-6 credit(s)
Repeatable

Geography

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/
College of Arts and Sciences

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.

**GEO 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  

**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.

**GEO 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 post-structuralist 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 Max'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**  
*College of Arts and Sciences*  
1-12 credit(s) Irregularly  
Reading and special work.  
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 GEO 683

**GEO 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 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

**GER 600 - 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

**GER 620 - Language Training in Preparation for Research Using German**  
*College of Arts and Sciences*  
3 credit(s)  
Language training to prepare students to conduct research in areas that require knowledge of German.  
Repeatable 3 time(s), 12 credits maximum

**Greek**

**GRE 500 - Greek Prose Authors**  
*College of Arts and Sciences*  
1-3 credit(s) Upon sufficient interest  
Readings from selected Greek prose authors.  
Repeatable

**GRE 620 - Language Training in Preparation for Research Using Greek**  
*College of Arts and Sciences*  
3 credit(s)  
Language training to prepare students to conduct research in areas that require knowledge of Greek.  
Repeatable 3 time(s), 12 credits maximum

**Hebrew**

**HEB 620 - Language Training in Preparation for Research Using Hebrew**  
*College of Arts and Sciences*  
3 credit(s)  
Language training to prepare students to conduct research in areas that require knowledge of Hebrew.  
Repeatable 3 time(s), 12 credits maximum

**Hindi**

**HIN 620 - Language Training in Preparation for Research Using Hindi**  
*College of Arts and Sciences*  
3 credit(s)  
Crosslisted with: SAS 621  
Language instruction to prepare students to conduct research in areas that require knowledge of Hindi. Permission of instructor.  
Repeatable 4 time(s), 12 credits maximum

**History of Art**

**HOA 500 - 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

**HOA 510 - Italian Medieval Architecture and Urbanism**  
*College of Arts and Sciences*  
3 credit(s)  
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 15th-century 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 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.

PREREQ: HOA 105 OR 106

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 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 17th-century life. A study of the interrelationship of the main forces in society and their expression in the arts.

PREREQ: (HOA 105 AND 106) OR (HOM 165 AND 166)

HOA 556 - Problems in Art History
College of Arts and Sciences
3-4 credit(s) At least 1x fall or spring
Selected period, major figure(s) or monument(s) in painting, sculpture, or architecture.

PREREQ: HOA 105 AND 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 106) OR (HOM 165 AND 166)

HOA 571 - Italian Architecture, 1909-1959
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
Repeatable 3 time(s), 12 credits maximum

HOA 577 - Introduction to Preservation
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: ARC 566

College of Arts and Sciences

HOA 600 - 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 620 - Seminar: Renaissance Art
College of Arts and Sciences
3-6 credit(s) At least 1x fall or spring
European art of the 15th and 16th centuries. Topic areas determined each semester. Repeatable

HOA 621 - Seminar in Florentine Art
College of Arts and Sciences
3-6 credit(s) At least 1x fall or spring
On-site study of late medieval, Renaissance, and baroque decorative complexes and their related archives. Taught only in Florence, Italy, during the spring semester.

HOA 622 - Seminar in Renaissance Arts and Ideas
College of Arts and Sciences
3-6 credit(s) At least 1x fall or spring
Preparation for study and research in Florence, Italy. Required of Florence Program participants; open to other students by permission. Repeatable 3 time(s), 12 credits maximum

HOA 635 - Seminar in Arts and Ideas
College of Arts and Sciences
3-6 credit(s) Irregularly
Selected topics in the arts and their relation to relevant societies. Topics determined each semester. Repeatable 3 time(s), 12 credits maximum

HOA 640 - Seminar on Women in Art
College of Arts and Sciences
3-4 credit(s) Irregularly
Women artists and images of women in the works of their contemporaries. Students conduct original research, relating topic to their specific areas of interest (interdisciplinary studies).

HOA 645 - Seminar in the History of Art Conservation
College of Arts and Sciences
History of Music

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 670 - 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

HOM 676 - Seminar in American Art
College of Arts and Sciences
3-6 credit(s) Irregularly
A specified topic is announced each time the course is offered.
Repeatable

HOM 680 - International Course
College of Arts and Sciences
1-12 credit(s) Irregularly
A specified topic is announced each time the course is offered.
Repeatable

HOM 756 - Seminar in Modern Art
College of Arts and Sciences
3-6 credit(s) Irregularly
Selected topics in the arts of the 20th century. Topics determined each semester.
Repeatable

HOM 757 - Art History Symposium Project
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Final M.A. research project, equivalent to a thesis, in which students research, write and orally present substantial and original scholarly work in art history. Permission of director of graduate studies.

HOM 758 - Selected Readings in Arts & Ideas
College of Arts and Sciences
1-6 credit(s) Irregularly
Selected readings on the arts and their relationship to their times. Subject areas and readings determined each semester.

College of Arts and Sciences

3-6 credit(s) At least 1x fall or spring
Theory, practice, and issues of art conservation from the Renaissance to the present. Taught only in Florence, Italy, during the spring semester.

HOA 650 - Seminar in Seventeenth-Century Netherlandish Art
College of Arts and Sciences
4 credit(s) Irregularly
Variable topics relating to art produced in the Dutch Republic and/or Flanders during the 17th century.
Repeatable 2 time(s), 12 credits maximum

HOA 651 - Seminar/Iconography
College of Arts and Sciences
3-6 credit(s) Irregularly
Selected topics in iconographical problems to be determined each semester.
Repeatable 3 time(s), 12 credits maximum

HOA 652 - Vermeer and Dutch Genre Painting
College of Arts and Sciences
3 credit(s) Irregularly
This course examines the art of Johannes Vermeer in relation to that of his contemporaries.

HOA 653 - Art & Patronage in England, 1558-1702
College of Arts and Sciences
3 credit(s) Irregularly
This interdisciplinary seminar will examine the nature and role of art in the celebrated Elizabethan, Jacobean, and Stuart courts of late sixteenth- and seventeenth-century England, up until the conclusion of the reign of William III.

HOA 655 - Proseminar in Graduate Research Methods and Scholarly Writing
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Research methods and scholarly writing skills required to be successful M.A. candidates and to become competitive professionals in art history and related fields.

HOA 656 - Literature of Art Criticism
College of Arts and Sciences
3-4 credit(s) At least 1x fall or spring
Leading trends in art criticism from the 16th to the early 21st century.

HOA 657 - Contemporary Art Criticism
College of Arts and Sciences
3-4 credit(s) Irregularly
Early 20th-century foundations and development of criticism within the past two decades.

Interpretive strategies, such as meta history, feminism, poststructuralism, and the anthropology of art.

HOA 670 - 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

HOA 676 - Seminar in American Art
College of Arts and Sciences
3-6 credit(s) Irregularly
A specified topic is announced each time the course is offered.
Repeatable

HOA 680 - 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

HOA 690 - Independent Study
College of Arts and Sciences
1-6 credit(s) Irregularly
Explore a topic, or topics, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of the supervising instructor(s) and the department.
Repeatable

HOA 720 - Seminar in Medieval Art
College of Arts and Sciences
3-6 credit(s) Irregularly
In depth exploration of a problem relating to medieval art and/or architecture. Topic determined each semester.
Repeatable

HOA 740 - Seminar in Baroque Art
College of Arts and Sciences
3-6 credit(s) Irregularly
Selected topics in the arts of the 17th century. Topics determined each semester.
Repeatable
College of Arts and Sciences

3 credit(s) Irregularly
Explodes 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 166 OR 266 OR HOM/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.

HOM 600 - 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

HOM 615 - History of Recorded Sound
College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: HOM 415
The history of sound recording technology from its origins to the present day. Additional work required of graduate students.

HOM 680 - 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 685 - Contemporary Indigenous Soundscapes
College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: HOM 485
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.

History

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 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.

Italian

ITA 620 - Language Training in Preparation for Research Using Italian
College of Arts and Sciences
3 credit(s)
Language training to prepare students to conduct research in areas that require knowledge of Italian.
Repeatable 3 time(s), 12 credits maximum

Japanese

JPS 620 - Language Training in Preparation for Research Using Japanese
College of Arts and Sciences
3 credit(s)
Language training to prepare students to conduct research in areas that require knowledge of Japanese.
Repeatable 3 time(s), 12 credits maximum

Judaic Studies Program

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.
Repeatable

JSP 600 - 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

JSP 676 - Religion and Jewish Literature
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 676

JSP 690 - 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

World Language Program: Korean

KOR 620 - Language Training in Preparation for Research in Korean
College of Arts and Sciences
3 credit(s) Every semester
Language instruction to prepare students to conduct research in areas that require knowledge of Korean. Permission of instructor.
Repeatable 3 time(s), 12 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 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.
Repeatable

LAS 623 - Effects of Globalization in Latin America
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: ANT 623
Double Numbered with: LAS 423
A grassroots view of major transformations in Latin America due to globalization/global change, including adaptations to global warming, effects of and reactions to neo-liberal policies, internal and international migration, ethnic movements and social revolutions.

Latin

LAT 620 - Language Training in Preparation for Research Using Latin
College of Arts and Sciences
3 credit(s)
Language training to prepare students to conduct research in areas that require knowledge of Latin. Repeatable 3 time(s), 12 credits maximum

LINGUISTICS

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 1x fall or spring
Survey of research on second-language acquisition; biological, cognitive, effective, and social factors.
PREREQ: LIN 301 OR LIN 601

LIN 600 - 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

LIN 601 - Introductory Linguistic Analysis
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 301
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.

LIN 611 - Semantics of Human Languages
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 411
Introduction to analysis of meaning in natural languages. Additional work required of graduate students.
PREREQ: LIN 601

LIN 612 - Pragmatics: Meaning and Context
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 412
Introduction to aspects of linguistic meaning that are dependent on context and other non-linguistic factors.
PREREQ: LIN 601

LIN 621 - 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 421
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 601

LIN 622 - Advanced Methods 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 422
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 621/LIN 421

LIN 626 - Structure of Standard Arabic
College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered 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.

LIN 631 - Phonological Analysis
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 431
Introduction to analysis of sound systems of natural languages. Extra work required of graduate students.
PREREQ: LIN 601/LIN 301

LIN 641 - Syntactic Analysis
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 441
Introduction to analysis of morphological and syntactic systems of natural languages. Extra work required of graduate students.
PREREQ: LIN 601/LIN 301

LIN 651 - Morphological Analysis
College of Arts and Sciences
3 credit(s)
Double Numbered with: LIN 451
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 601

LIN 661 - Introduction to Historical Linguistics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 461
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 601/LIN 301

LIN 671 - Dimensions of Bilingualism and Multiculturalism
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 471
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 441/LIN 641

LIN 673 - Language Variation and Change
College of Arts and Sciences
3 credit(s) Irregularly
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.
PREREQ: LIN 641/LIN 441

LIN 675 - Forensic Linguistics
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: LIN 475
Examines the application of core linguistic concepts, (including concepts of socio-psychological/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 681 - Global Communication Through World Englishes
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 481
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 691 - Universal Grammar and Second Language Acquisition
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: LIN 491
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 641

LIN 735 - Advanced Phonology
College of Arts and Sciences
3 credit(s) Irregularly
A variety of phonological problems using an autosegmental or geometric approach. Stress and tone; gemination; compensatory lengthening; and certain morphological problems.
PREREQ: LIN 635/435

LIN 741 - Advanced Syntax
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Recent advances in syntactic theory and empirical studies conducted within the government and binding framework. Student construction of hypotheses and analysis of data.
PREREQ: LIN 641/441

LIN 997 - Masters Thesis
College of Arts and Sciences
1-6 credit(s) Upon sufficient interest

Literature in English Translation

LIT 510 - Studies in Greek and Roman Literature in Translation
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Selected topics in Greek or Roman literature studied in English. No knowledge of Greek or Latin required.
Repeatable

LIT 521 - Mythology
College of Arts and Sciences
3 credit(s) Irregularly
Greek, Roman, and Norse myths. Knowledge of foreign languages not required.

Mathematics

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 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 414 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 518 - Fourier Series, Transforms and Wavelets
College of Arts and Sciences
3 credit(s) Irregularly
Orthogonal functions, Fourier series, Fourier transforms-continuous and discrete, Haar wavelets and multiresolution analysis, applications to signal processing. 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 275) 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 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 polynomial 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 1x 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 275) 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
Permutations, combinations, recurrence relations, generating functions, inclusion-exclusion and applications, introdutory graph theory. PREREQ: MAT 375 OR CIS 275 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 275) 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 1x 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.

MAT 601 - Fundamentals of Analysis I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Real and complex numbers, elementary point set topology, sequences and series, continuity, differentiation.

PREREQ: MAT 512 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 602 - Fundamentals of Analysis II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Riemann-Stieljes integration, functional sequences and series, functions of several variables.

PREREQ: (MAT 601 AND MAT 631) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 631 - Introduction to Algebra I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Linear algebra, linear transformations, eigenvectors, diagonalization, inner product spaces, groups, quotient groups, group actions, Sylow theorems, finitely generated Abelian groups, rings, unique factorization domains, finitely generated modules over principal ideal domains, fields, Galois theory.

PREREQ: (MAT 531 AND MAT 534) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 645 - Graph Theory
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: CIS 645
Fundamentals of graph theory and special topics including networks, matching, connectivity, planarity, and automorphism groups.

PREREQ: MAT 531 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 646 - Enumeration, Designs, and Matroids
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CIS 646
Generating functions, Polya enumeration, set systems, design parameters, finite projective planes, matroids.

PREREQ: MAT 531 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 651 - Probability and Statistics I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Calculus of probabilities, univariate and multivariate random variables and distribution functions, expectations and variance, conditional distributions, transformations of random variables, characteristic functions, basic limit theorems including Borel-Cantelli, Khinchin, Lindeberg-Feller.

PREREQ: MAT 521 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 652 - Probability and Statistics II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Point and interval estimation, consistent, efficient, and sufficient statistics, Rao-Blackwellization, hypothesis testing, brief treatment of ranking and selection, decision theory.

PREREQ: MAT 651 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 653 - Statistical Simulation and Nonstandard Data Analysis
College of Arts and Sciences
3 credit(s) Irregularly
Simulation and Monte Carlo techniques appropriate where statistical theory does not yet provide a solution. Design and analysis of experiments under nonstandard conditions.

PREREQ: MAT 651 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 654 - Linear Models
College of Arts and Sciences
3 credit(s) Irregularly
Point estimation by least squares, regression, curve fitting, testing a linear hypothesis, analysis of variance, simple experimental designs.

PREREQ: (MAT 525 AND MAT 531) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 661 - Introduction to Topology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Topological spaces, continuous mappings, compactness, connectedness, path connectedness, separation axioms, metric spaces, quotient spaces, CW complexes, the fundamental group, and the classification of 2-dimensional manifolds.

PREREQ: MAT 512 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 682 - Numerical Linear Algebra
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8

PREREQ: MAT 511 AND MAT 531

MAT 683 - Methods of Numerical Analysis I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring

PREREQ: MAT 512 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 684 - Methods of Numerical Analysis II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Analysis of numerical methods for approximating solutions of ordinary and partial differential equations.

PREREQ: MAT 683 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 687 - Introduction to Applied Mathematics
College of Arts and Sciences
3 credit(s) Irregularly
Mathematical model building, dimensional analysis, scaling, and perturbation theory. Models selected from the natural and social sciences according to the interests of instructor and students. Examples are: planetary orbits, fluid flow, isomers in organic chemistry, biological competition, biochemical kinetics, and physiological flow.

PREREQ: MAT 512 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 690 - 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

MAT 701 - Real Variables I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Measure and integration, including basic theorems on integration and differentiation of sequences of functions; modes of convergence, product measures.

PREREQ: MAT 602 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 702 - Functional Analysis I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Norms, seminorms, and inner products on linear

**PREREQ:** (MAT 631 AND MAT 661 AND MAT 701) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 704 - Differential Equations**
*College of Arts and Sciences*
3 credit(s) Irregularly

**PREREQ:** (MAT 632 AND MAT 701) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 705 - Calculus on Manifolds**
*College of Arts and Sciences*
3 credit(s) Irregularly
Differentiable manifolds, differential forms, exterior calculus, integration over manifolds, Stokes' Theorem, other selected topics.

**PREREQ:** (MAT 602 AND MAT 632 AND MAT 661) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 712 - Functions of a Complex Variable I**
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring
Cauchy theory, power series, analytic continuation, entire functions, the residue theorem, contour integration, maximum modulus theorem and applications, conformal representation. Dirichlet series, special functions.

**PREREQ:** MAT 602 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 721 - Probability I**
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring

**PREREQ:** (MAT 602 AND MAT 701) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 722 - Probability II**
*College of Arts and Sciences*
3 credit(s) Irregularly

**PREREQ:** MAT 721 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 731 - Rings and Modules**
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring
Submodules, factor modules, chain conditions, Hilbert basis theorem, division rings, Schur's lemma, Jacobson density theorem, semi-simple modules, socles, Jacobson radical, semi primitive rings, Artin-Wedderburn theorem, integral extensions, completions, localization.

**PREREQ:** (MAT 631 AND MAT 632) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 732 - Homological Algebra**
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring
Projective and injective resolutions, Tor and Ext, flatness, homology, derived categories, spectral sequences.

**PREREQ:** MAT 731 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 733 - Commutative Algebra**
*College of Arts and Sciences*
3 credit(s) Irregularly
Localization, primary decomposition, and dimension theory; Nullstellensatz; Artin-Rees lemma and completion; integral and flat extensions; Koszul complex, Cohen-Macaulay and regular rings.

**PREREQ:** MAT 731

**MAT 737 - Representations of Groups and Algebras**
*College of Arts and Sciences*
3 credit(s) Irregularly
The course covers representations of finite groups and finite-dimensional algebras. Topics will come from: ordinary and modular representations of finite groups, Auslander-Reiten theory, representations of quivers, Koszul algebras, Hopf algebras and Frobenius algebras.

**PREREQ:** MAT 731

**MAT 738 - Introduction to Algebraic Geometry**
*College of Arts and Sciences*
3 credit(s) Irregularly
The study of the zeros of polynomials. Classical algebraic varieties in affine and projective space, followed by introduction to modern theory of sheaves, schemes, and cohomology.

**PREREQ:** MAT 632 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 750 - Statistical Consulting**
*College of Arts and Sciences*
3 credit(s) Irregularly
Experience in working with real data taken from current projects in the statistical laboratory and from published papers.

**PREREQ:** (MAT 632 AND MAT 661) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 752 - Statistical Ranking, Selection, and Multiple Comparisons**
*College of Arts and Sciences*
3 credit(s) Irregularly
Statistical selection of the best category or population. Preference-zone and subset formulations. Multivariate preferences and populations. Applications. Recent developments, including Multiple Comparisons with the Best (MCB) and the Heteroscedastic Method (HM).

**PREREQ:** MAT 652 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 753 - Decision Theory**
*College of Arts and Sciences*
3 credit(s) Irregularly
Minimax theorems, completeness of the class of Bayes procedures. Invariance. Criteria for admissibility.

**PREREQ:** MAT 525 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 754 - Sequential Analysis**
*College of Arts and Sciences*
3 credit(s) Irregularly
General sequential decision problems, sequential probability ratio test, sequential test among three hypotheses, sequential estimation, optimal stopping, Wald's identity. Generalized SPRT's, Cox's theorem, sequential regression, functional equations, dynamic programming, sequential choice of experiments.

**PREREQ:** MAT 525 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 755 - Multivariate Statistical Analysis**
*College of Arts and Sciences*
3 credit(s) Irregularly
Multivariate normal distribution, conditional densities, partial correlation, multiple correlation, regression coefficients, maximum likelihood estimates, Hotelling's statistic, Wishart distribution, tests of hypotheses, and linear discriminant functions.

**PREREQ:** MAT 525 OR MAT 532 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

**MAT 761 - Introduction to Algebraic Topology**
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring
Fundamental group covering spaces, chain complexes, simplicial or singular homology and cohomology theory, exact sequences, and the Eilenberg-Steenrod axioms.

**PREREQ:** (MAT 632 AND MAT 661) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES
MATHEMATICAL SCIENCES

MAT 762 - Algebraic Topology
College of Arts and Sciences
3 credit(s) Irregularly
Homology, cohomology ring, universal coefficient theorem, duality, homotopy, theory, selected topics.
PREREQ: (MAT 632 AND MAT 761) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 771 - Differential Geometry
College of Arts and Sciences
3 credit(s) Irregularly
Differential manifolds, tensor fields and mappings, differential forms and Stokes's theorem, affine connections, exponential mapping, covariant differentiation, torsion and curvature tensors, Riemannian connections, complete Riemannian manifolds, other modern topics.
PREREQ: (MAT 602 AND MAT 632 AND MAT 661) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 781 - Advanced Numerical Methods I
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: (MAT 632 AND MAT 684 AND MAT 704) OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 782 - Advanced Numerical Methods II
College of Arts and Sciences
3 credit(s) Irregularly
Continuation of MAT 781.
PREREQ: MAT 781 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 800 - Topics In Analysis
College of Arts and Sciences
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

MAT 802 - Real Variables II
College of Arts and Sciences
3 credit(s) Irregularly
Topics in real variables and measure theory, such as differentiation theory in euclidean and abstract spaces, generalized derivatives and integrals, ergodic theory, martingales, surface area.
PREREQ: MAT 701 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 804 - Functional Analysis II
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: MAT 702 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 805 - Partial Differential Equations
College of Arts and Sciences
3 credit(s) Irregularly

MAT 807 - Integral Equations
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: MAT 804 OR GRADUATE STANDING IN MATHEMATICAL SCIENCES

MAT 809 - Topics in Statistics
College of Arts and Sciences
0-15 credit(s) Every semester
Research work on a doctoral dissertation, under supervision of some member of the graduate staff. Credit depends on amount of time devoted to the work; course may be repeated up to a maximum of 30 credits.
Repeatable 14 time(s), 30 credits maximum

MAT 880 - Topics in Numerical Analysis and Applied Mathematics
College of Arts and Sciences
Repeatable

MAT 890 - Advanced Seminar
College of Arts and Sciences
1-6 credit(s) Irregularly
For advanced graduate students and staff members; credit determined by extent of participation in the seminar.
Repeatable

MAT 999 - Dissertation
College of Arts and Sciences
0-15 credit(s) Every semester
Research work on a doctoral dissertation, under supervision of some member of the graduate staff. Credit depends on amount of time devoted to the work; course may be repeated up to a maximum of 30 credits.
Repeatable 14 time(s), 30 credits maximum

Neuroscience

NEU 613 - Readings in Neuroscience
College of Arts and Sciences
0-3 credit(s) Irregularly
Crosslisted with: BEN 614, BIO 625, CSD 753, PSY 778
A literature-based team-taught course focusing on in depth discussions of classical or recent papers of exceptional import to neuroscience. Students will complete weekly readings assigned by faculty and participate in a 3-hr/wk group facilitated discussion

NEU 614 - Interdisciplinary Methods of Neuroscience
College of Arts and Sciences
0-3 credit(s) Irregularly
Crosslisted with: BEN 614, BIO 625, CSD 754, PSY 779
A practical interdisciplinary survey course whereby neuroscience faculty introduce students to a wide array of methodologies, including molecular, cellular, developmental, systems, behavioral, and cognitive neuroscientific approaches to investigate basic, pre-clinical, translational, and clinical questions to unravel the relationship between brain and behavior.

NEU 777 - Advanced Cognitive Neuroscience
College of Arts and Sciences
3 credit(s) Irregularly
The science of how thought processes are instantiated in the brain including advanced techniques for behavioral and neural data and approaches for linking them together. Applications that demonstrate the brain-behavior relationship.

**Philosophy**

**PHI 500 - Selected Topics**  
*Graduate Standing*  
3 credit(s) Irregularly  
Study of a significant philosopher or philosophical movement.  
Repeatable

**PHI 510 - Topics in Ancient Philosophy**  
*Graduate Standing*  
3 credit(s) At least 1x 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**  
*Graduate Standing*  
1-3 credit(s) Irregularly  
Study of a significant philosophical problem.  
Repeatable

**PHI 551 - Mathematical Logic**  
*Graduate Standing*  
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 275

**PHI 552 - Modal Logic**  
*Graduate Standing*  
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**  
*Graduate Standing*  
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**  
*Graduate Standing*  
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**  
*Graduate Standing*  
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**  
*Graduate Standing*  
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 computer simulation.

**PHI 576 - Philosophy of Mind**  
*Graduate Standing*  
3 credit(s) Irregularly  
Advanced study of topics in philosophy of mind.  
PREREQ: PHI 301 OR 376 OR 377 OR 378 OR GRADUATE STANDING

**PHI 583 - Metaphysics**  
*Graduate Standing*  
3 credit(s) Irregularly  
Introduction to metaphysical inquiry.  
PREREQ: ANY PHI OR JUNIOR OR SENIOR STANDING

**PHI 593 - Ethics and the Health professions**  
*Graduate Standing*  
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**  
*Graduate Standing*  
3 credit(s) Irregularly  
Crosslisted with: REL 552  

**PHI 600 - Selected Topics**  
*Graduate Standing*  
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 615 - Kant’s Critique of Pure Reason**  
*Graduate Standing*  
3 credit(s) Irregularly  
Readings, papers, and discussions aimed at appraising value of the Critique, both as a historical document and as a continuing source of philosophical questions and answers.

**PHI 617 - Proseminar: History of Philosophy**  
*Graduate Standing*  
3 credit(s) At least 1x fall or spring  
Analysis of arguments and concepts in the history of philosophy. At least two major philosophical problems, as examined in the works of at least three major philosophers. Writing-intensive.

**PHI 618 - Hegel, Marx, and Nietzsche**  
*Graduate Standing*  
3 credit(s) Irregularly  
Double Numbered with: PHI 418  
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.

**PHI 622 - Twentieth Century French and German Philosophy**  
*Graduate Standing*  
3 credit(s) Irregularly  
Double Numbered with: PHI 422  
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.

**PHI 629 - Islamic Metaphysics and Epistemology**  
*Graduate Standing*  
3 credit(s) Irregularly  
Crosslisted with: REL 629
In-depth study of the main epistemological systems and theories of metaphysics developed in Islamic intellectual tradition. Explores the systems of interpretation of the Qur’an and Sunnah developed by legal scholars, mystics and philosophers.

**PHI 640 - Continental Philosophy of Religion**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: REL 660  
Continental philosophers such as Husserl, Heidegger, Levinas, Derrida, Foucault, Deleuze, Irigaray, and Marion. Their influence on theology, religious theory. Topics include overcoming ontologism; phenomenology, deconstruction and theology; return of religion.  
Repeatable 1 time(s), 6 credits maximum

**PHI 650 - Selected Topics in Philosophy**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Repeatable

**PHI 651 - Logic and Language**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Introduction to systems of formal logic and their relationships with natural language. Standard logic; its relationships with linguistics, philosophy, and mathematics. Translation and the limits of formalization.

**PHI 665 - Problems in Philosophy of Language**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Selected areas or problems in the philosophy of language, e.g., meaning and reference, speech-act theory, logical form, referential opacity, generative semantics, or semantics and ontology.  
Repeatable

**PHI 673 - The Structure of Science**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Such topics as relations among observations, laws, and theoretical construct: nature of scientific explanations, philosophical theories of probability, and character of inductive reference.

**PHI 687 - Proseminar: Language, Epistemology, Mind and Metaphysics**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Selected major philosophical problems in philosophy of language, epistemology, philosophy of mind, and/or metaphysics, as examined in the works of at least three major philosophers. Writing intensive.

**PHI 693 - Proseminar: Moral and Political Philosophy**  
*College of Arts and Sciences*  
3 credit(s) Every semester  
Selected major philosophical problems in moral and political philosophy as examined in the works of at least three major philosophers. Writing intensive.

**PHI 695 - Aesthetics**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Chief aesthetic theories from Plato to the present. Application to literature and the fine arts.

**PHI 696 - Selected Problems in Aesthetics**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Philosophical issues that arise within the various arts and literature.  
PREREQ: PHI 695

**PHI 700 - Research in History of Philosophy**  
*College of Arts and Sciences*  
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

**PHI 710 - Seminar in Ancient and Medieval Philosophy**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Repeatable

**PHI 730 - Seminar in Modern Philosophy**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Repeatable

**PHI 740 - Seminar in Contemporary Philosophy**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Repeatable

**PHI 750 - Seminar in Current Philosophical Problems**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Repeatable

**Physics**

**PHY 523 - Advanced Mechanics**  
*College of Arts and Sciences*  
3 credit(s) At least 1x 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  
and statistical mechanics.

PREREQ: PHY 361

**PHY 567 - Introduction to Quantum Mechanics I**  
*College of Arts and Sciences*

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

Problems with classical physics; one dimensional Schrödinger 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 567 - 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 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

**PHY 581 - Methods of Theoretical Physics I**  
*College of Arts and Sciences*

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


PREREQ: MAT 511

**PHY 607 - Computational Physics**  
*College of Arts and Sciences*

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

Necessary numerical and computations tools for research in physics. The scope and implementation of scientific simulation algorithms for solving specific physics problems.

PREREQ: PHY 211 OR 215 OR AP PHYSICS C (MECH) EXAM SCORE MIN 3

**PHY 614 - Graduate Laboratory**  
*College of Arts and Sciences*

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

The student will select a topic in experimental physics and undertake an open-ended investigation with research-quality equipment in an active research laboratory or in a departmental facility. Ideas and progress will be discussed at a weekly seminar.

**PHY 615 - Biological and Medical Physics**  
*College of Arts and Sciences*

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

Double Numbered with: PHY 315

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 216 OR AP PHYSICS C (ELEC & MAG) EXAM SCORE MIN 3

**PHY 621 - Classical Mechanics**  
*College of Arts and Sciences*

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

Aspects of classical mechanics of significance to modern physical theory. Conceptual structure of Newton’s mechanics, Lagrange’s equations, Hamilton’s principle, canonical equations and canonical transformations, Hamilton-Jacobi theory, small oscillations, rigid-body motion.

**PHY 635 - Physical Cell Biology**  
*College of Arts and Sciences*

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

Crosslisted with: BEN 635, BIO 635, CEN 635, CHE 635

This interdisciplinary class for science and engineering students provides an introduction to the quantitative description of biological systems and processes. The focus is on the biological and physical aspects of structure and function of cells and their subsystems.

**PHY 638 - Open Problems in Soft Interfaces**  
*College of Arts and Sciences*

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

Crosslisted with: BEN 638, BIO 638, CEN 638, CHE 638

In this seminar course on soft and biological materials and interfaces, teams from science and engineering will identify, discuss and assess current articles from the literature. Writing skills related to publishing peer-reviewed research are introduced.

**PHY 641 - Advanced Electromagnetic Theory I**  
*College of Arts and Sciences*

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


PREREQ: PHY 425 OR ELE 325

**PHY 642 - Advanced Electromagnetic Theory II**  
*College of Arts and Sciences*

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

Advanced topics illustrating electrodynamics of continuous media; plasmas; superconductivity and vacuum phenomena; particle optics; classical field theory, etc.

PREREQ: PHY 641 AND MAT 511

**PHY 651 - Instrumentation in Modern Physics**  
*College of Arts and Sciences*

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

Double Numbered with: PHY 351

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 661 - Quantum Mechanics I**  
*College of Arts and Sciences*

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


PREREQ: PHY 567

**PHY 662 - Quantum Mechanics II**  
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring
PREREQ: PHY 567 AND PHY 661

PHY 663 - Problem Solving in Graduate Physics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Problem solving skills and topics not covered in courses the previous year.
PREREQ: PHY 662

PHY 676 - Condensed Matter Physics
College of Arts and Sciences
3 credit(s) Irregularly
Dielectric, optical, and magnetic properties of matter. Magnetic and superconducting phases. Quantum transport and quantum Hall effect.
PREREQ: (PHY 576 OR ELE 642) AND PHY 662

PHY 690 - 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 731 - Thermodynamics and Statistical Mechanics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
First and second laws of thermodynamics, Boltzman's integrrodifferential equation, Gibb's statistical mechanics, petit and grand ensembles, quantum statistics.
PREREQ: PHY 531

PHY 750 - Topics in Advanced Condensed Matter/Physics Theory
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: PHY 731
Repeatable

PHY 765 - Models of Condensed Matter
College of Arts and Sciences
3 credit(s) Irregularly
Theoretical models for phases of condensed matter. Supercconductivity, weak and strong disorder, magnetism, renormalization group theory of phase transitions. Many-body Green's functions and broken-symmetry concept.
PREREQ: PHY 576 OR ELE 642

PHY 771 - High Energy Particle Physics I
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: PHY 662

PHY 772 - High Energy Particle Physics II
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: PHY 662

PHY 775 - High Energy Particle Theory I
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: PHY 763

PHY 776 - High Energy Particle Theory II
College of Arts and Sciences
3 credit(s) Irregularly
PREREQ: PHY 763

PHY 785 - Theory of Relativity I
College of Arts and Sciences
3 credit(s) Irregularly
Special and general theory of relativity. First semester: technical introduction to established theory. Part of second semester: current research topics.
PREREQ: PHY 621

PHY 786 - Theory of Relativity II
College of Arts and Sciences
3 credit(s) Irregularly
Special and general theory of relativity. First semester: technical introduction to established theory. Part of second semester: current research topics.
PREREQ: PHY 621

PHY 795 - Modern Cosmology
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Introduction to main ideas of modern cosmology. Expanding universe within general relativity; thermodynamics and cosmology; the cosmic microwave background; dark matter; dark energy and inflation; structure formation in the universe and connections between cosmology and particle physics.
PREREQ: PHY 763 AND PHY 785

PHY 831 - Statistical Mechanics of Fields and the Renormalization Group
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
A continuation of graduate statistical physics. Topics include: collective modes and quasiparticles, Ginzburg-Landau theory, modern theory of phase transitions, and the renormalization group.
PREREQ: PHY 731

PHY 880 - Selected Topics in Advanced Theoretical Physics
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Topics vary over advanced field theory, gravitational physics, condensed matter theory, solitons, supersymmetry, cosmology, string theory, and others. With permission, may be taken more than once for credit.
PREREQ: PHY 662
Repeatable 1 time(s), 3 credits maximum

PHY 885 - Quantum Field Theory I
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8

PHY 886 - Quantum Field Theory II
College of Arts and Sciences
3 credit(s) Irregularly

**PHY 890 - Minor Problems In Physics**  
*College of Arts and Sciences*  
1-3 credit(s) Every semester  
Independent study and experimentation in some subject in physics.  
Repeatable

**PHY 990 - 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 997 - Masters Thesis**  
*College of Arts and Sciences*  
1-6 credit(s) At least 1x fall or spring  
Repeatable

**PHY 999 - Dissertation**  
*College of Arts and Sciences*  
0-15 credit(s) At least 1x fall or spring  
Repeatable

**Polish**

**POL 620 - Language Training in Preparation for Research Using Polish**  
*College of Arts and Sciences*  
3 credit(s) Every semester  
Language training to prepare students to conduct research in areas that require knowledge of Polish.  
Repeatable 3 time(s), 12 credits maximum

**Portuguese**

**POR 620 - Language Training in Preparation for Research Using Portuguese**  
*College of Arts and Sciences*  
3 credit(s) Every semester  
Language training to prepare students to conduct research in areas that require knowledge of Portuguese.  
Repeatable 3 time(s), 12 credits maximum

**Psychology**

**PSY 611 - Proseminar Methods and Topics in Cognitive Psychology**  
*College of Arts and Sciences*  
3 credit(s) Only during the summer  
Discussion of methods, theories, and findings for student selected and faculty-selected topics in cognitive psychology.  
Repeatable 3 time(s), 12 credits maximum

**PSY 612 - Advanced Experimental Psychology**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Current theories, topics, and methods in experimental psychology. Analysis and critique of research that uses experimental methods. Permission from Instructor.

**PSY 614 - Cognitive and affective bases of behavior**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
This course is intended to provide a scientific basis for students understanding of cognition and affect, and how both of these impact/relates to typical and atypical development through classic and contemporary readings.

**PSY 615 - Behavioral Pharmacology**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Behavioral effects of major psychoactive drugs. Basic concepts in pharmacology, behavioral techniques in drug research, the current status of minor and major tranquilizers, antidepressants, stimulants, hallucinogens, and drugs of abuse. Permission from Instructor.

**PSY 617 - Individual differences and developmental disability**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
This course is intended to provide a scientific basis for students understanding of individual differences and their stability over development with a special focus on developmental disability.

**PSY 621 - Contemporary Behavioral Approaches in Health Psychology**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Theory and methods derived from advances in psychology. Biofeedback autogenic training, guided imagery, hypnosis, and multimodal psychophysiological techniques. Permission from Instructor.

**PSY 622 - Cognitive Psychology: Memory and Attention**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Theory and experimentation in human cognition emphasizing how information processing models are constructed, tested, and modified. Permission from Instructor.

**PSY 623 - Psychological Research of Family Systems**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
General systems theory as related to psychological processes. Current research programs on psychopathology and family systems. Psychological and empirical focus; not a therapy course. Permission from Instructor.

**PSY 624 - Research Methods in Clinical Psychology**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  

**PSY 626 - Cognitive Neurochemistry**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Double Numbered with: PSY 426  
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.

**PSY 631 - Alcohol Use and Abuse**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Double Numbered with: PSY 431  
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.
PSY 640 - Psychology of Gender
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: WGS 640
Research and literature related to sex differences. Process of socialization of girls and boys, women and men in American society. Permission of Instructor. Repeatable

PSY 647 - Clinical Assessment I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Experience in administration, interpretation, and report writing with individual intelligence tests, objective personality measures, and related clinical tools. Discussion of testing theory. Permission of Instructor.

PSY 648 - Assessment II
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Advanced assessment training in clinical and diagnostic interviewing, administering and interpreting psychological assessment instruments, providing consultation in response to a specific referral question, writing assessment reports, and providing feedback.
PREREQ: PSY 647

PSY 649 - Ethical and Professional Issues in Clinical Psychology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Professional, ethical, scientific, training, and practice issues in clinical psychology. Detailed coverage of some recent assessment, treatment, and conceptual issues. Permission of Instructor.

PSY 651 - Introduction to Statistical Methods
College of Arts and Sciences
3 credit(s) Irregularly

PSY 653 - Psychological Measurement
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Double Numbered with: PSY 353
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.

PSY 655 - Experimental Design and Statistical Methods I
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Experimental research design. Distributions, graphs, exploratory data analysis, and descriptive statistics. Sampling and basic probability. Between-participants and within-participants designs. Inferential statistics: t-tests, one-way ANOVA, factorial ANOVA, and ANCOVA.

PSY 674 - Advanced Social Psychology
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Recurrent methodological problems in social psychology. Integration of experimental design, research findings, and theoretical formulations. Permission of Instructor.

PSY 675 - Social Influences on Human Sexual Behavior
College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: PSY 475
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.

PSY 676 - Group Processes
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Research and theory. Social communication, group cohesiveness, social norms and roles, leadership, group productivity, and related topics. Permission of Instructor.

PSY 677 - Social Cognition
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Social inference, attribution theory, psychological control, social schemata, attention, person memory and social cognition biases. Permission of Instructor.

PSY 678 - Attitude Change
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Research and theory concerning the formation and change of beliefs and attitudes. Factors that influence the effectiveness of persuasive communications, cognitive organization, the relation of belief to action, and related topics. Permission of Instructor.

PSY 679 - Research Methods in Social Psychology
College of Arts and Sciences
3 credit(s) Irregularly
Methodology of research in social psychology. Experimental design, sampling procedures, observational methods, questionnaires and interviews, sociometric methods, attitude scaling, analysis and interpretation of data. Permission of Instructor.

PSY 680 - Seminar in Health Psychology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Psychological factors as they interact with health and illness. Includes presentation on cardiovascular disorders, pain, diabetes, issues pertaining to health care, primary care psychology, spirituality and health, and prevention, among other selected topics. Permission of Instructor.

PSY 682 - Physiological Processes and Health Psychology
College of Arts and Sciences
3 credit(s) Irregularly
Graduate level introduction to basic human physiology within the context of health psychology. Particular focus on multi-directional interactions between physiological processes, behavior, and psychological variables. Permission of Instructor.

PSY 691 - Meta-Analysis
College of Arts and Sciences
3 credit(s) Irregularly
Statistical procedures, as well as practical issues involved in the conduct of meta-analyses. Permission of Instructor.
PREREQ: PSY 655

PSY 693 - Advanced Personality
College of Arts and Sciences
3 credit(s) Irregularly
Concepts and research in the development, motivation, and organization of personality. Recent empirical findings.

PSY 696 - Neuropsychology
College of Arts and Sciences
3 credit(s) Irregularly
Theoretical, empirical, and clinical diagnosis, understanding, and treatment of individuals with neurological disturbance. In-depth study of human brain function and dysfunction. Implications for new theory, research, and treatment. Permission of Instructor.

PSY 730 - Seminar in Experimental Psychology
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Discussion, readings, and projects in experimental psychology. Topics vary. Permission of Instructor. Repeatable 1 time(s), 6 credits maximum

College of Arts and Sciences
PSY 734 - Developmental Psychology: Infancy and Childhood  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Infant and child behavior. Research methods and strategies, empirical relationships, theories of child development, and theories of behavior. Permission of Instructor.

PSY 736 - Advanced Introduction to Cognitive Psychology  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
A broad and general introduction to the empirical and theoretical foundations of cognitive psychology. The course will explore the ways in which cognition and affect come together to drive behavior.

PSY 737 - Experimental Psychology: Cognition and Human Aging  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Basic and applied experimental psychological research in the area of cognition and human aging. Emphasizing aging and perception, attention, learning, memory, and intelligence. Permission of Instructor.

PSY 739 - Lifespan Developmental Psychology  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Permission of Instructor.

PSY 745 - Introduction to Psychotherapy  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Major approaches to adult psychotherapy and their relationship to personality development and change. Permission of Instructor.

PSY 746 - Survey to Psychotherapy Research  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Seminar on research philosophies, experimental designs, methodological issues, and major findings in psychotherapy research. Permission of Instructor.

PSY 756 - Principles of Behavior Modification  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g. 2007-8  
Experimental and theoretical advances in learning relevant to the management of clinical phenomena. Operant and classical conditioning, modeling, aversive controls, extinction, and issues in behavior therapy. Permission of Instructor.

PSY 775 - Seminar in Social Psychology  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Discussion, readings, and projects in selected topics in social psychology. Permission of instructor. Repeatable 3 time(s), 12 credits maximum.

PSY 777 - Advanced Cognitive Neuroscience  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: NEU 777  
The science of how thought processes are instantiated in the brain including advanced techniques for behavioral and neural data and approaches for linking them together. Applications that demonstrate the brain-behavior relationship.
psychological sciences. Path analysis, confirmatory factor analysis, and structural regression models.

PREREQ: PSY 756

PSY 840 - Advanced Practicum in Clinical Health Psychology
College of Arts and Sciences
3 credit(s) Every semester
Health psychology field placement. Practicum experience in multidisciplinary settings. Interviewing, brief intervention, ethics, diversity, contemporary issues in the field. Permission of Instructor.

PSY 843 - Seminar in Psychopathology
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Discussion, readings, and projects on selected topics in psychopathology and related areas. Presupposes a knowledge of personality theory and abnormal psychology. Permission of Instructor.

PSY 847 - Practicum in Psychotherapy
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Theory, technique, and supervised experience in conducting psychotherapy. Supervision and training of novice psychotherapists. Permission of Instructor.

PSY 849 - Advanced Practicum in Clinical Psychology
College of Arts and Sciences
3 credit(s) Irregularly
For advanced students in psychological diagnosis and treatment. Supervised experience in counseling, play therapy, group therapy, and psychological diagnosis with children and adults. May be taken for a maximum of six credits. Repeatable 1 time(s), 6 credits maximum

PSY 851 - Clinical Therapy Experience Practicum
College of Arts and Sciences
0 credit(s) Odd academic yr e.g. 2007-8
Clinical psychology graduate students will conduct intake assessments, psychotherapy, and interventions as necessary with clients in the Psychological Services Center or other placement. They will receive supervision and develop their clinical intervention skills.

PSY 853 - Experimental Design and Statistical Tests
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Experimental design and appropriate statistical tests. Use of the analysis of variance and covariance techniques.

PSY 854 - Bayesian Statistical Analysis
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
An introduction to Bayesian data analysis, with an emphasis on designs typically encountered in the behavioral and social sciences.

PSY 857 - Multivariate Analysis
College of Arts and Sciences
3 credit(s) Irregularly
Statistical techniques dealing with situations in volving many variables. Multivariate analysis of variance, discriminant analysis, canonical correlations, and classification procedures.

PSY 860 - Topics in Psychology
College of Arts and Sciences
3 credit(s) Irregularly
Special topics of current interest. Topics vary from semester to semester. May be taken for credit three times. Permission of Instructor. Repeatable 2 time(s), 9 credits maximum

PSY 861 - Consultation Processes
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Research on consultation processes from diverse theoretical perspectives. Laboratory involving role playing and simulation of stages of consultation. Ethical and legal issues of indirect service delivery.

PSY 862 - Consultation Practicum
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Supervised practical experience in consultation process: problem identification and analysis, treatment implementation, and process and outcome evaluation. Database indirect service delivery consistent with ethical and legal guidelines.

PSY 863 - Developmental Psychopathology
College of Arts and Sciences
3 credit(s) Upon sufficient interest
Developmental perspective on problems of childhood adjustment from infancy to adolescence. Theoretical concepts of etiology, descriptive characteristics, differential diagnosis, and intervention approaches for each disorder. Permission of Instructor.

PSY 865 - Behavioral Assessment: Research and Theory
College of Arts and Sciences
3 credit(s) Irregularly
Theoretical and empirical issues in assessing interaction between people and environments. Direct observation in naturalistic and analogous settings, interviews and other self-report measures, and psychophysiological measures. Permission of Instructor.

PSY 866 - Behavior Theory Practicum
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Review of literature, research, and ethical/legal issues concerning the treatment of children's learning and adjustment problems using behavioral principles. Supervised experience in behavioral assessment, treatment implementation, and outcome evaluation. PREREQ: PSY 765 OR PSY 865

PSY 870 - Internship in School Psychology
College of Arts and Sciences
0-6 credit(s) At least 1x fall or spring
Supervised internship in school and/or other child/youth agency. Permission of Instructor. Repeatable

PSY 880 - School Psychology Practicum
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Supervised experience in school settings, applying direct and indirect psychological services with outcome evaluation. Consideration of legal and ethical issues and broader community context for child-related services. Permission of Instructor. Repeatable

PSY 894 - History and Systems Psychology
College of Arts and Sciences
3 credit(s) Irregularly
Detailed treatment of principal forces that have played an important role in the evolution of modern psychology. Permission of Instructor.

PSY 895 - Theories of Health and Behavior
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Major theories of health and behavior, including issues in theory construction and model building are examined. Practical exercises teach theory integration in designing behavior change interventions in behavioral medicine, health promotion, and disease prevention. Permission of instructor is required.

PSY 896 - Neuropsychological Assessment
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Neuropsychological assessment with administration of neuropsychological test batteries to adults and children with suspected neurological problems. Case analysis, interpretation, and report writing. Permission of Instructor. PREREQ: PSY 596

PSY 899 - Projects in Psychology
College of Arts and Sciences
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 1x 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

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.

REL 600 - 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

REL 601 - Theories and Methods in the Study of Religion
College of Arts and Sciences
3 credit(s) Irregularly
Introduction to “classic” literature and issues in the field of religion.
Survey and evaluation of major ritual theories, tested against a particular set of religious and cultural practices, such as those involving purification and pollutions, or holidays and festivals.

**REL 620 - Textual Scripts in the Study of Religion**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g., 2004-5  
Theories and descriptions of how texts shape people's words, actions and experiences, both religious and secular, and how people use and perform texts for spiritual and social effects on religious objects, cultures, traditions and themselves.  
Repeatable 1 time(s), 9 credits maximum

**REL 621 - Teaching World Religions in Theory and Practice**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
The complexities of teaching introductory courses in world religions, especially in the context of recent debates on comparison as well as the very concept of "religion." Graduate standing.

**REL 622 - Sacrifice**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
An investigation of “sacrifice” as a name for ritual and non-ritual practices in contemporary and historical societies and in academic discourse about religions and cultures.

**REL 625 - Pluralism in Islam**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Historical development of multiple discourses within the Muslim world. Role of Islamic texts, institutions, and contexts on intra-Islamic politics of identity, representation, and religious authority. Hybridity and syncretism of Islam in contemporary local contexts.

**REL 626 - Beyond the Veil: Gender Politics in Islam**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: MES 626  
Double Numbered with: REL 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.

**REL 627 - Globalization and Religion: Processes and problems**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Sophisticated works in globalization theory emerge from sociology, economics, political history, and contemporary cultural studies with broad significance for the study of religion. Bringing these into conversation with religious studies is the project of this seminar. Graduate standing.

**REL 628 - Muslim Rituals, Practices, and Performances**  
*College of Arts and Sciences*  
3 credit(s) Odd academic yr e.g., 2007-8  
Crosslisted with: ANT 628  
Historical, cultural, and sociological analysis of pan-Islamic festivals and rituals. Local, culturally-specific, unofficial practices in Islam.

**REL 629 - Islamic Metaphysics and Epistemology**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: PHI 629  
In-depth study of the main epistemological systems and theories of metaphysics developed in Islamic intellectual tradition. Explores the systems of interpretation of the Qur'an and Sunnah developed by legal scholars, mystics and philosophers.

**REL 630 - Textual Bodies in the Study of Religion**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
An exploration of the intersections of texts and bodies within religious cultures texts as bodies (from literary corpus to material object), bodies as texts (inscribed and read), and above all bodies in texts.  
Repeatable 2 time(s), 9 credits maximum

**REL 640 - The Philosophical Foundations of Religion**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Philosophic and religious heritage highlighted by Pythagoras, Socrates, Plato, Aristotle, Plotinus, Augustine, and Aquinas. Focus varies from year to year.  
Repeatable

**REL 642 - Critical Issues in the Study of Native Americans**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: ANT 691  
Methodological issues related to studies of indigenous traditions and develops interpretive strategies for using literature about Native American religions.

**REL 644 - Feminist Theology**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: WGS 644  
Feminist theology as a global religious movement from its roots in U.S. feminism to its current political and philosophical battles.

**REL 650 - Themes in 19th Century Religious Thought**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Religious thought in 19th century Europe and America. Themes may include God, freedom, and selfhood; Romanticism and religion; and religion, freedom, and slavery. Figures examined may include Kierkegaard, Kant, Douglass, Emerson, and others.  
Repeatable 1 time(s), 6 credits maximum

**REL 651 - Classics in the Sociology of Religion and Morals**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: ANT 651, SOC 651  
Classical sociological writings of Emile Durkheim and Max Weber and their contemporary significance.

**REL 652 - Psychoanalysis and Religious Ethics**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Psychoanalysis and its implications for religious ethics.

**REL 653 - Postmodern Ethics**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Selected philosophical and religious perspectives on postmodern ethics. Readings from Rorty, Stout, Kristeva, Wyschogrod, MacIntyre, Nussbaum, and others.

**REL 654 - Religious Corporealities**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Ways in which corporealities are shaped by and shape religious texts and traditions, philosophically and practically. Potential topics include nudity, body, flesh, skin, and sensuality, with attention to sexuality and biopolitics.
REL 656 - Christianity and the Enlightenment
College of Arts and Sciences
3 credit(s) Irregularly
Theological responses of representative thinkers to the challenges of the new science, natural religion, Deism, and the philosophies of the European Enlightenment.

REL 658 - The Other in Ethics
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
The significance of the Other in contemporary religious and philosophical ethics. Readings in Levinas, Lacan, Derrida, Kristeva, Critchley, Caputo.

REL 659 - Kierkegaard Seminar
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
This seminar examines a wide array of themes and issues in Kierkegaard's religious thought which may include Kierkegaard and Romanticism; Kierkegaard on Love, God and Selfhood; Kierkegaard and Politics; Kierkegaard's Existential Aesthetics.
Repeatable 2 time(s), 9 credits maximum

REL 660 - Continental Philosophy of Religion
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: PHI 640
Continental philosophers such as Husserl, Heidegger, Levinas, Derrida, Foucault, Deleuze, Irigaray, and Marion. Their influence on theology, religious theory. Topics include overcoming onto-theology; phenomenology, deconstruction and theology; return of religion.
Repeatable 1 time(s), 6 credits maximum

REL 661 - Self, Body, Transcendence
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: WGS 661
Examines Continental and American feminist and gender theory for intersections between religion, subjectivity, and bodily practice.

REL 662 - Marx and Foucault
College of Arts and Sciences
3 credit(s) Irregularly
Texts from Marx and Foucault are read for their implications for Religion scholars.

REL 663 - Religion and Revolution
College of Arts and Sciences
3 credit(s) Irregularly
Texts from theology and political theory that examine their mutual terms, themes, and concerns.

REL 665 - Religion and Mass Culture
College of Arts and Sciences
3 credit(s) Irregularly
Twentieth-century theories of mass culture are read for their use and implications for religion scholars. [Effective spring 2009]

REL 666 - Postmodern Theology
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Philosophical background of postmodernism and its theological and cultural expressions. Content varies.
Repeatable

REL 667 - Postmodern Theology
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Philosophical background of postmodernism and its theological and cultural expressions. Content varies.
Repeatable

REL 668 - Critical Theory in Theology
College of Arts and Sciences
3 credit(s) Odd academic yr e.g. 2007-8
Theories of discourse formation and textual production in theology in relationship to the critique of ideologies of theory.

REL 671 - Religion and Post-Freudian Depth Psychologies
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: PHI 640

REL 676 - Religion and Jewish Literature
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: JSP 676
Readings in Jewish literature, with emphasis on gendered visions of power in mythic, allegorical, hasidic, neohasidic, and anti-hasidic writing by Nahman of Bratslav, Joseph Perl, I.L. Peretz, Franz Kafka, Isaac Babel, and S.Y. Agnon.

REL 685 - Buddhism, Culture, Modernity
College of Arts and Sciences
3 credit(s) Every semester
Explores the diversity of adaptations by Buddhist adherents to the global condition of modernity and the ways in which modernity has created what we think of as Buddhism today.

REL 686 - Zen Master Dogen
College of Arts and Sciences
3 credit(s) Irregularly

REL 687 - Global Hinduism
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: REL 487
Exploring how mobile middle-class Hindus re-create 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 689 - Memory, Culture, Religion
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ANT 689
Collective memory and constructions of the past as cultural phenomena; the roles religious identities, values, and institutions play as individuals, communities, and nations recollect particular moments, eras, crises, and localities.

REL 691 - Approaches to the Study of Religion
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Introduction to classic texts, methods and approaches used in the field of religion and in this department. Must be enrolled in the Religion Department M.A. or Ph.D. programs.

REL 692 - Other People's Religions
College of Arts and Sciences
3 credit(s) Irregularly
Explores the ways that Western studies of non-Western religions have dealt with difference. Central aim is to understand the politics of knowledge and the arts of interpretation involved in research and writing about other people's religious traditions.

REL 693 - Materiality of Religion
College of Arts and Sciences
3 credit(s) Irregularly
Methodological issues related to the interpretation of diverse religious phenomena including architecture, the body, and land.

REL 696 - Gender and Religion: Theory and Practice
College of Arts and Sciences
3 credit(s) Irregularly
Focus on the intertwining of gender and religion; emphasis on gendered visions of power in mythic, symbolic, and ritual phenomena. Readings in feminist and anthropological theory as well as cultural cases in ethnography and history of religions.

REL 698 - Anthropology of Religion
College of Arts and Sciences
3 credit(s) Every semester
Surveys contributions to theories by anthropologists on the role of religion in societies from the founding of the discipline to the present day.

REL 699 - Writing Religions and Cultures: Ethnographic Practice
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: ANT 699
A range of aims and strategies for writing ethnographies of religion in the multiple contexts of culture, history, and politics.

REL 719 - Research and Writing in the History and Thought of the New Testament
College of Arts and Sciences
3-6 credit(s) Every semester

REL 739 - Research and Writing in the History and Thought of Israel
College of Arts and Sciences
3-6 credit(s) Every semester

REL 749 - Research and Writing in Religion and Society
College of Arts and Sciences
3-6 credit(s) Every semester
Repealable

REL 759 - Research and Writing in Religious History and Thought
College of Arts and Sciences
3-6 credit(s) Every semester

REL 769 - Research and Writing in Philosophy of Religion and Theology
College of Arts and Sciences
3-6 credit(s) Every semester
Repealable

REL 779 - Research and Writing in Religion and Culture
College of Arts and Sciences
3-6 credit(s) Every semester

REL 789 - Research and Writing in History of Religions
College of Arts and Sciences
3-6 credit(s) Every semester

REL 799 - Research and Writing in Methodology
College of Arts and Sciences
3-6 credit(s) Every semester

REL 997 - Master's Thesis
College of Arts and Sciences
1-6 credit(s) Every semester
Repealable

REL 999 - Dissertation
College of Arts and Sciences
1-15 credit(s) Every semester
Repealable

Russian

RUS 620 - Language Training in Preparation for Research Using Russian
College of Arts and Sciences
3 credit(s) Every semester
Language training to prepare students to conduct research in areas that require knowledge of Russian.
Repealable 3 time(s), 12 credits maximum

Science Teaching

SCI 544 - Teaching of College Science
College of Arts and Sciences
3 credit(s) At least 1x 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.

SCI 670 - 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.
Repealable

SCI 701 - General Science Comprehensive Paper
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Comprehensive science paper required for the M.S. degree in general science. Topic selected by student and advisor. Given in cooperation with the various science departments.

SCI 990 - 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.
Repealable

SCI 999 - Dissertation
College of Arts and Sciences
3-15 credit(s)
Repealable

Sociology

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.
Repealable 1 time(s), 6 credits maximum

Spanish

SPA 601 - Literary Theory and Research Methods
College of Arts and Sciences
3 credit(s) Irregularly
Reading in semiotics and research theory concerning literary texts.

SPA 620 - Language Training in Preparation for Research Using Spanish
College of Arts and Sciences
3 credit(s) Every semester
Language training to prepare students to conduct research in areas that require knowledge of Spanish.
Repealable 3 time(s), 12 credits maximum

SPA 635 - Spanish Phonetics and Phonology
College of Arts and Sciences
3 credit(s)
Introduction to formal linguistic analysis of the Spanish sound system. Survey of dialectal variation. Additional work required of graduate students.
SPA 636 - The Structure of Spanish
*College of Arts and Sciences*
3 credit(s)
Double Numbered with: SPA 436

Introduction to the formal linguistic analysis of the structure of Spanish sentences. Additional work required of graduate students.

SPA 637 - Introduction to Spanish Linguistics
*College of Arts and Sciences*
3 credit(s)
Double Numbered with: SPA 437

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.

SPA 638 - History of the Spanish Language
*College of Arts and Sciences*
3 credit(s)
Double Numbered with: SPA 438

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 639 - Community Outreach: Language in Action
*College of Arts and Sciences*
3 credit(s) Irregularly

Double Numbered 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.

SPA 641 - Medieval and Golden Age Literature
*College of Arts and Sciences*
3 credit(s) Irregularly

Critical reading of significant literary works drawn from the Middle Ages and the 16th and 17th centuries.

SPA 643 - Cervantes
*College of Arts and Sciences*
3 credit(s) Irregularly

Don Quijote, with selections from other representative works by Cervantes.

SPA 652 - Spanish Enlightenment to Modernism: Aesthetics and Power
*College of Arts and Sciences*
3 credit(s)

Through a diverse theoretical approach, analyzes the construction of the following notions: literature, nation, identity, and gender. Representations of women in literary and cinematic texts.

SPA 653 - Sinner and Saints in 19th and 20th Century Spanish Literature and Film
*College of Arts and Sciences*
3 credit(s)

Crosslisted with: WGS 653

Representations of women in novel, poetry, theater, and film through diverse theoretical approaches. Issues of power, sex, hierarchy, and institution.

SPA 655 - Caribbean Spaces
*College of Arts and Sciences*
3 credit(s) Odd academic yr e.g. 2007-8

This course explores visions of urban imaginaries in Caribbean and U.S. Caribbean cultures. It analyzes the intersections between urban spaces and the formation of local/global subjectivities.

SPA 656 - Reality and Desire: Theater and Poetry (20th Century)
*College of Arts and Sciences*
3 credit(s)

A diachronic study of the Spanish theater and poetry. Literary works will include texts by Valle-Inclán, Machado, García Lorca, Alexandre, Cernuda, Sastre, Buero Vallejo, among others.

SPA 658 - Narrative and Film in Spain (1940 to the Present)
*College of Arts and Sciences*
3 credit(s)


SPA 662 - Latin American Colonial Literature
*College of Arts and Sciences*
3 credit(s)

Literature written during the Colonial period and contemporary criticism and theory about that period.

SPA 663 - The Structure of Spanish
*College of Arts and Sciences*
3 credit(s)

Double Numbered with: SPA 436

Introduction to the formal linguistic analysis of the structure of Spanish sentences. Additional work required of graduate students.

SPA 664 - Nineteenth Century Latin American Literature
*College of Arts and Sciences*
3 credit(s)

Narratives and poetry written during the 19th century in Latin America. Analyzed in relation to literary movements such as costumbrism, romanticism, realism, naturalism, and the gaucho trend.

SPA 665 - Performance and Postmodernism in Latin America
*College of Arts and Sciences*
3 credit(s)

Latin American theater written or performed from 1990 to the present alongside theories on performance and postmodernism related to Latin America and its theater.

SPA 667 - Latin American Literature and Feminist Theory
*College of Arts and Sciences*
3 credit(s)

Crosslisted with: WGS 671

Includes reading and critical discussion of novels by 20th-century Latin American women writers and an introduction to feminist theory as it pertains to Latin America.

SPA 668 - Narrative and Film in Spain (1940 to the Present)
*College of Arts and Sciences*
3 credit(s)


SPA 669 - Latin American Colonial Literature
*College of Arts and Sciences*
3 credit(s)

Literature written during the Colonial period and contemporary criticism and theory about that period.

SPA 670 - Latin American Theater
*College of Arts and Sciences*
3 credit(s)

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

SPA 678 - Latin American Literature in the New Millenium
*College of Arts and Sciences*
3 credit(s) Upon sufficient interest

This course will trace the major developments in Latin American literature since 1970. It will consider the rise of an indigenous literary tradition, the role of migration and the refugee movement, and the influence of global cultural flows.
Latin American literature and cultural phenomena that followed the Boom, with emphasis on the production of the 21st century.

SPA 679 - The Literature of Postmodernism in Latin America
College of Arts and Sciences
3 credit(s)
Contemporary trends in Latin-American literature.

SPA 681 - U.S. Latina/o Literature
College of Arts and Sciences
3 credit(s)
Literary texts written by Latina/os in Spanish from the 17th century to present. Focus from late 19th century to the present; examining socio-historic, cultural and literary contexts.

SPA 685 - Contemporary Spanish-American Literature
College of Arts and Sciences
3 credit(s) irregularly
Preursors, modernists, and postmodernists

SPA 686 - Thinking/Writing the Nation
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
An introduction to texts within the variety of discursive modernity models of 19th century Latin America. From Independence Era to the end of that century.

SPA 687 - Revisiting Foundational Fictions
College of Arts and Sciences
3 credit(s) Even Academic Yr e.g. 2004-5
A discussion of Anderson’s Imagined Communities and Sommer’s Foundational Fictions, to determine how helpful they are today in the study and mapping of 19th century Latin American narrative texts.

SPA 690 - 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(s) and the department. Repeatable

Applied Statistics

STT 690 - 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

College of Arts and Sciences

STT 750 - Statistical Consulting
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: MAT 750
Experience in working with real data taken from current projects in the statistical laboratory and from published papers.

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 1x 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 555 - Food, Culture and Environment
College of Arts and Sciences
3 credit(s) At least 1x 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.
on the gendered construction of space and the spatial construction of gender.

**WGS 600 - 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

**WGS 601 - 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 605 - Religion and the Body in Late Antiquity**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: REL 605  
History of the human body as history of its modes of construction in Graeco-Roman antiquity. Problems that arise when the body becomes a topic for religious inquiry. Readings in ancient texts and contemporary theory.

**WGS 612 - French Women Writers**  
*College of Arts and Sciences*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Crosslisted with: FRE 612  
Double Numbered with: WGS 412  
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 614 - Introduction to Qualitative Research**  
*College of Arts and Sciences*  
3 credit(s) Every semester  
Crosslisted with: EDU 603, SOC 614  
Developing and using qualitative methods used by sociologists to conduct research. Underlying assumptions and limitations.

**WGS 615 - Communication, Power & Gender**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: CRS 614  
Consideration of the ways in which communication structures power and gender relations. Reviewing Continental and North American literature on power, and feminist literature on gender, students study how communication produces social identities and hierarchies.

**WGS 625 - Feminist Organizations**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SOC 625  
Double Numbered with: WGS 425  
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 626 - Persons in Social Context**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SWK 626  
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 627 - New York City: Black Women Domestic Workers**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: AAS 627, SOC 627  
Double Numbered with: WGS 427  
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 628 - Human Diversity in Social Contexts**  
*College of Arts and Sciences*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SWK 628  
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 635 - Readings in Feminist Psychological Theories**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Crosslisted with: SWK 635  
Feminist psychological theories will be identified and analyzed. The intersection of feminist theory and traditional psychological theory, with particular critique to mental health interventions and programs will be examined.

**WGS 636 - Feminist Rhetoric(s)**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: CCR 636, CRS 636  
Double Numbered with: 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.

**WGS 640 - Psychology of Gender**  
*College of Arts and Sciences*  
3 credit(s) Upon sufficient interest  
Crosslisted with: PSY 640  
Research and literature related to sex differences. Process of socialization of girls and boys, women and men in American society. Permission of Instructor.  
Repeatable

**WGS 644 - Feminist Theology**  
*College of Arts and Sciences*  
3 credit(s) Irregularly  
Crosslisted with: REL 644  
Feminist theology as a global religious movement from its roots in U.S. feminism to its current political and philosophical battles.

**WGS 645 - 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 645, SOC 645  
Double Numbered with: WGS 445  
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 649 - Seminar on Women in Art**  
*College of Arts and Sciences*  
3-4 credit(s) Irregularly  
Crosslisted with: HOA 640  
Women artists and images of women in the works of their contemporaries. Students conduct original research, relating topic to their specific areas of interest (interdisciplinary studies).

**WGS 652 - Feminism and Postcolonial Studies**  
*College of Arts and Sciences*
WGS 651 - Intersectionality
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Double Numbered with: WGS 452
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.

WGS 671 - Latin American American Literature and Feminist Theory
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: SPA 671
Includes reading and critical discussion of novels by 20th-century Latin American women writers and an introduction to feminist theory as it pertains to Latin America.

WGS 652 - Language, Culture, and Society
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: ANT 652, LIN 652
Double Numbered with: WGS 452
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 672 - Women, Rap and Hip-Hop Feminism
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 672
Double Numbered with: WGS 472
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 653 - Sinner and Saints in 19th and 20th Century Spanish Literature and Film
College of Arts and Sciences
3 credit(s)
Crosslisted with: SOC 653
Represents the different ways that literature and film negotiate schools and popular cultures. Includes theories of popular culture and adolescence. Negotiates “good” and “bad” youth, and how youth 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 654 - Aging and Society
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: SOC 654
Double Numbered with: WGS 364
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 705 - 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 self-definition; examines politics of everyday life, including untellable silences and violence; considers how authors crafts to resist marginalization.

WGS 655 - Culture and AIDS
College of Arts and Sciences
3 credit(s) Irregularly
Double Numbered with: WGS 455
Additional work required of graduate students.

WGS 656 - Self, Body, Transcendence
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: REL 656
Examines Continental and American feminist and gender theories for intersections between religion, subjectivity, and bodily practice.

WGS 657 - Black Feminist Theories
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 725, HED 725
Historical and contemporary higher education from an interdisciplinary perspective; considers dynamics of power, privilege, and oppression; includes topics related to student and faculty experiences, and curricular issues.

WGS 658 - Latin American American Literature and Feminist Theory
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: SPA 671
Includes reading and critical discussion of novels by 20th-century Latin American women writers and an introduction to feminist theory as it pertains to Latin America.

WGS 659 - Women, Rap and Hip-Hop Feminism
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 672
Double Numbered with: WGS 472
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 660 - Independent Study
College of Arts and Sciences
1-6 credit(s) Every semester
Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department. Repeatable.

WGS 700 - 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 661 - Woman, Rap and Hip-Hop Feminism
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 661
Double Numbered with: WGS 461
Empirical study of women’s experiences of, participation in, and resistance to different forms of violence. Additional work required of graduate students.

WGS 662 - Youth Schooling and Popular Culture
College of Arts and Sciences
3 credit(s) At least 1x fall or spring
Crosslisted with: CFE 662
Double Numbered with: 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.

WGS 663 - Women, Rap and Hip-Hop Feminism
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 663
Double Numbered with: WGS 363
Examines women’s experiences of, participation in, and resistance to different forms of violence. Additional work required of graduate students.

WGS 701 - Intersectionality
College of Arts and Sciences
3 credit(s) Irregularly
Introduces intersectionality as an analytic. Offers an overview of intersectionality applications in theory, methods, and politics. Focuses on contemporary and historical intersectionality literatures, particularly in Black feminist and women of color theorizing.

WGS 702 - Feminist Theories of Knowing
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 725, HED 725
Examines the influence of gender and race in historical and contemporary higher education from interdisciplinary perspective; considers power, privilege, and oppression; includes topics related to student and faculty experiences, and curricular issues.

WGS 703 - Feminist Theories of Knowing
College of Arts and Sciences
3 credit(s) Irregularly
Crosslisted with: CFE 725, HED 725
Examines the influence of gender and race in historical and contemporary higher education from interdisciplinary perspective; considers dynamics of power, privilege, and oppression; includes topics related to student and faculty experiences, and curricular issues.
Crosslisted with: AAS 757

Explores historical backgrounds and contemporary expressions of Black feminist thought around the globe to broaden our knowledge of feminist theory. We take an interdisciplinary approach to Black feminist theory that crosses genres and disciplines.

**WGS 764 - Gender and Globalization**
*College of Arts and Sciences*
3 credit(s) Irregularly
Crosslisted with: ANT 764, GEO 764

The impact of the increasing hypermobility of capital and culture flows across borders on gender relations.

**WGS 776 - Gender, Education & Culture**
*College of Arts and Sciences*
3 credit(s) Irregularly
Crosslisted with: CFE 776, DSP 776

How gender is culturally constructed in American society with particular reference to education broadly conceived; how race and social class influence gender analysis.

**WGS 795 - Practice of Transnational Feminism**
*College of Arts and Sciences*
3 credit(s) Irregularly

Advanced seminar on core theoretical, methodological, and ethical issues in transnational feminist praxis. Focus on feminist anti-capitalist critique, counterhegemonic struggles, and emancipatory knowledge production. Working space for ongoing student research and pedagogy.

**WGS 812 - Advanced Seminar in Qualitative Research I**
*College of Arts and Sciences*
3 credit(s) At least 1x fall or spring
Crosslisted with: EDU 810, SOC 811

Expand fieldwork skills and increase theoretical understanding: emphasis on "thinking qualitatively," intensive fieldwork.

**WGS 821 - Feminist Methodologies**
*College of Arts and Sciences*
3 credit(s) Upon sufficient interest
Crosslisted with: SOC 821

The feminist critique and its implications for planning, conducting, and reporting on empirical studies.

**WGS 833 - Race, Class and Gender**
*College of Arts and Sciences*
3 credit(s) Upon sufficient interest
Crosslisted with: SOC 833

Intersecting dimensions of inequality that structure social life in contemporary societies. Multiple effects of cross cutting oppressions and privileges, including sexuality and ability/disability.

**WGS 876 - Feminist Geography**
*College of Arts and Sciences*
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: GEO 876

The relationships between gender, space, and place. Topics include the gendered spaces of everyday life, identity and spatial metaphor, geographies of the body and the border, human migration, gender and the city.

**Writing Program**

**WRT 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

**WRT 617 - Technical Documentation & Usability**
*College of Arts and Sciences*
3 credit(s) Irregularly
Double Numbered with: WRT 417

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.

**WRT 619 - Advanced Technical Writing Workshop**
*College of Arts and Sciences*
3 credit(s) Irregularly
Double Numbered with: WRT 419

Intensive experience in writing technical texts. Additional work required of graduate students.

**WRT 627 - Emerging Technologies in Professional & Technical Writing**
*College of Arts and Sciences*
3 credit(s) Irregularly
Double Numbered with: WRT 427

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.

**WRT 637 - Rhetoric and Information Design**
*College of Arts and Sciences*
3 credit(s) Irregularly

Double Numbered with: WRT 437

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.

**WRT 647 - Professional & Technical Writing in Global Contexts**
*College of Arts and Sciences*
3 credit(s) Irregularly

Double Numbered with: WRT 447

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.

**WRT 670 - Practicum: Teaching College Writing**
*College of Arts and Sciences*
0-3 credit(s) At least 1x fall or spring

Presentation and discussion of classroom, conference, and paper grading techniques. Planning and evaluating the student's own teaching.
Repeatable
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.

Accreditation

The Syracuse University Unit for Preparing School Professionals (Unit) is accredited by the National Council for Accreditation of Teacher Education (NCATE), which is now part of the Council for the Accreditation of Educator Preparation. The Syracuse University 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. 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/

Graduate Education

Degree Requirements

Each graduate degree offered by the school represents a different level of achievement.

The Master of Science (M.S.), Master of Art (M.A.), or Master of Music(M.Mus.) is the first degree beyond the bachelor's degree. Each master's program is designed to develop in-depth knowledge of a particular field of professional education.

The Certificate of Advanced Study (C.A.S.) offers greater scope, depth, and thoroughness of preparation beyond the master's degree, or an opportunity for specialized study that is less than a master's degree.

A doctoral degree is considered the highest level of academic achievement. The Ph.D. is an academic degree. The Ed.D. is a professional degree. Students with an interest in research or in university teaching usually pursue the Ph.D. Their programs emphasize intensive study in a major area of specialization and often a minor area as well, leading to the development or extension of theory and research in the major field. Many Ed.D. candidates seek positions as administrators, supervisors, consultants, college professors, and as non-teaching education specialists.

General information about degree requirements is listed below. For details on degree requirements, see information provided by the Office of Academic and Student Services, 111 Waverly Avenue, Suite 230, 315-443-9319. Information on specific requirements is available from the office of the chair or coordinator of each program of study.

Master's Degree

The School of Education offers the M.S. in more than 30 areas, the M.Mus. in music education and the M.A. in media and education. Selected areas of study lead to public school teacher certification; others prepare students for roles in various educational and non-educational settings. Many master degree programs are available to applicants with no previous study in that field.

Preparation programs meet the academic requirements for those with a bachelor’s degree in a field other than education who pursue their first certificate for public school service in a specific area. Preparation programs also serve those who are certified in one area but seek certification in a new area.

Master's professional certification programs are designed for those who are already certified in a subject area but want a master's degree in that same area to meet academic requirements for the next level of certification.
A select number of master's programs prepare students for roles not requiring certification, while others lead to doctoral candidacy. For a complete listing, see "Programs Offered and Degrees Conferred."

All master's degree programs require a minimum of 30 credits; some require more. Some programs allow students to elect one or more courses offered by other academic units of Syracuse University, such as the Maxwell School of Citizenship and Public Administration or the Colleges of Arts and Sciences, Visual and Performing Arts, The David B. Falk College of Sport and Human Dynamics. No more than 9 credits (6 credit limit for Higher Education) taken outside of Syracuse University may be transferred into a 30-credit master's degree program.

All master's programs require one of the following: a thesis, a portfolio review, or an intensive examination. Graduate students must maintain a GPA of 3.0 to graduate.

Certificate of Advanced Study (C.A.S.)
The C.A.S. program is a step beyond the master's level, but is distinct from doctoral study. The certificate is not an intermediate step to a doctoral degree but is considered a terminal degree providing the specialization necessary for a variety of positions. The C.A.S. programs in Educational Leadership and Counselor Education may also meet the academic requirements for New York State certification in those areas.

C.A.S. Requirements
Generally, the C.A.S. includes 60 credits with at least half at Syracuse University, an overall B average, a qualifying examination, an appropriate field project/activity, an extended internship, and at least 30 credits in the field and 9-21 credits outside the field of study.

In addition to the traditional C.A.S. offered by the School of Education, both the School’s Department of Cultural Foundations of Education (CFE) and its Instructional Design, Development and Evaluation Department (IDD&E) offer non-traditional Certificates of Advanced Study:

CFE offers a Certificate of Advanced Study in Disability Studies. This is a 15 credit program, with the additional requirement of an oral or written examination at the completion of the coursework. The C.A.S. in Disability Studies is available to students enrolled in any Syracuse University graduate program as well as to applicants who wish to pursue the C.A.S. as a single course of study. This Department also offers a 15 credit C.A.S. in media & education. This C.A.S. is designed to be completed in one year of part-time study. The program is capped on each end with a full-time, on-campus residency (first weeks of July, then last weeks of the following June). Fall and Spring courses are completed online.

IDD&E offers three Certificate of Advanced Study programs in Designing Digital Instruction (15 credits), Educational Technology (15 credits), and Instructional Design Foundations (12 credits). These programs are designed for students who require additional knowledge and expertise in order to advance in their professional careers.

Doctoral Degree
Candidates must first decide whether to pursue the Ed.D. or the Ph.D. Before applying for the doctoral degree, the candidate should correspond with the program coordinator of the specific program of interest and, if possible, arrange for a personal interview.

Programs for both the Ph.D. and the Ed.D. degrees require a minimum of 90 graduate credits beyond the bachelor's degree, usually distributed among core requirements, major area requirements, supporting minor areas, research tools, and dissertation credits. One-half of pre-dissertation course credits must be taken at Syracuse University. Successful candidates for either doctoral degree must pass a preliminary examination early in the program, and qualifying examinations in the field of specialization and any supporting minor areas later in the program; demonstrate competence in research; write a dissertation based upon an independent investigation that adds to existing knowledge in the field; and pass an oral defense of the dissertation. An overall B average, completion of a residency or time-to-completion requirement, and completion of all requirements within 5 years of the qualifying examination are also required. All candidates for the Ph.D. degree are required to complete a research apprenticeship, including a supervised research activity over a period of not less than one year, under the direction of a University faculty member. Ed.D. students must complete a practicum requirement.

Non-matriculated Students
Students with a bachelor's degree from an accredited institution may take courses in the School of Education without enrolling in a degree program (non-matriculated student). Some courses require approval of the instructors. Enrolling in coursework as a non-matriculated student does not allow the non-matriculated student the same academic advisement as matriculated students. No more than 9 credits taken before matriculation may be transferred to a degree program. No more than 6 credits may be taken prior to matriculating into the Higher Education M.S. degree program. All such courses must be approved by the student's advisor. A registration hold will be put on students' accounts who have reached this limit.

Graduate Admissions
Graduate study at Syracuse University’s School of Education offers students opportunities to participate in a vibrant learning community. Students and faculty work together in a variety of laboratory research and clinical settings on campus, in schools, and in related educational agencies. Graduate students acquire the advanced knowledge and skills needed to be successful leaders. Advantages to pursuing graduate study at the School of Education include the insight of professors holding dual appointments in the school and other colleges in the University, cooperative relations of colleges and departments, and availability of supporting services.

The school is composed of the following seven academic departments:
- Counseling and Human Services
- Cultural Foundations of Education
- Exercise Science
- Higher Education
- Instructional Design, Development, and Evaluation
- Reading and Language Arts
- Teaching and Leadership

Why students consider graduate study at the School of Education:
- Syracuse University’s School of Education has prepared scholars from around the world.
- Students become part of a community that has a commitment to inclusion and diversity. The School of Education pioneered the inclusion movement in the United States, making it possible for all learners to participate in typical classrooms.
- Both teaching and non-teaching degree programs are offered.
- Students are assured opportunities for research, clinical practice, and internships designed to clarify relationships of theory and practice.
- Students are assured the assistance of a mentoring faculty to help them truly benefit from their experiences at Syracuse University.
- The School of Education is comprised of approximately 700 graduate students who have the opportunity to develop personal and professional relationships that will last a lifetime.
- Students enjoy the advantages of a multidisciplinary approach to learning.

How to Apply
For more information about graduate study, please contact Speranza Migliore, Graduate Admissions Recruiter, School of Education, 111 Waverly Avenue, Suite 230, Syracuse, N.Y. 13244-2340; e-gradcrt@syr.edu, 315-443-2505.

Ready to Apply?
The Syracuse University online application is available at https://apply.embark.com/grad/syracuse/37/.

Deadlines
Individuals interested in applying to a master's or doctoral degree program should contact the academic department overseeing the program of study to obtain deadline information.

In general, most graduate programs within the School of Education participate in rolling
admissions and admit students on a space-available basis. The School of Education will continue to receive and review applications on a space-available basis.

**Graduate Application Fee**
The Graduate Application Fee is $75.

**Internal Admission Process**
Students who are currently enrolled in a Syracuse University graduate program, or who have completed a Syracuse University graduate program within the last 12 months may apply for a new graduate program by using the Graduate Enrollment Internal Admission Application. The internal admission application and instructions are available in the Office of Academic and Student Services, located at 111 Waverly Avenue, Suite 230. Students enrolled in concurrent master's programs must complete the requirements for both programs prior to graduation. There is no fee for the internal admission process.

**Graduate Financial Aid**
The School of Education offers a variety of funding opportunities for graduate students. This funding includes scholarships, graduate and teaching assistantships, in addition to opportunities for grants. The School of Education provides merit based as well as non-competitive scholarships. A number of the funding opportunities offered have deadlines for application submission. There are several categories of scholarships available only to School of Education students.

Click here and use the links in the left hand column to learn more about funding opportunities.

**The Office of Financial Aid and Scholarship Programs**
The Office of Financial Aid and Scholarship Programs is available to address questions, offer options for payment, assist in filing student loan and grant applications, and suggest financial planning options. For additional financial aid information, call (315) 443-1513 or email FinAidG1@syr.edu.

**Assistantships**
The School of Education offers graduate and teaching assistantships to graduate students with superior qualifications. These graduate assistantships may include tuition support and a stipend. Assistants have responsibilities to the University not exceeding an average of 20 hours a week and devote the remainder of their time to study and research. Applicants for assistantships should write to the chair of the program to which they are applying, highlighting relevant background for the type of assistantship in which they are interested and emphasizing information not included in the admissions application. Applicants interested in assistantships in other University departments should send inquiries directly to those departments.

**Graduate Student Tuition Scholarship Program**
This scholarship was created to assist students who have graduated from Syracuse University (any degree program) within the last five years and who enroll full-time in a selected School of Education Master of Science (M.S.) program listed below. This tuition scholarship program offers graduate students in eligible programs funding covering a portion of the student’s tuition.

Students in the following preparation/professional M.S. programs are eligible to receive the scholarship:

- Art Education
- Clinical Mental Health Counseling (for SU Selected Studies in Education graduates ONLY)
- Early Childhood Special Education
- English Education
- Exercise Science (for SU Health and Exercise Science graduates ONLY)
- Inclusive Special Education (Grades 1-6 and 7-12 (generalist))
- Inclusive Special Education (Severe/Multiple Disabilities)
- Instructional Technology
- Literacy Education (Birth-Grade 12)
- Mathematics Education
- Music Education
- School Counseling
- Student Affairs Counseling (for SU Selected Studies in Education graduates ONLY)
- Science Education (Earth Science, Biology, Chemistry, and Physics)
- Social Studies Education
- Teaching English Language Learners
- Teaching and Curriculum
- Urban Education

The tuition scholarship program covers a portion of the tuition charges students are responsible for paying each semester during which the student is enrolled as a full-time student in an approved program (or part-time master’s students who are Syracuse City School District employees). Full-time study is defined as registered for 9 credits for fall and spring (or a total of 6 credits for summer). Students must formally be admitted and matriculated into one of the specified M.S. programs and maintain satisfactory academic progress toward that degree, which includes attaining and maintaining a 3.0 cumulative grade point average by the end of the second semester in the program. The scholarship does not cover tuition for undergraduate courses even if required as a condition of full admission to the master’s program. (Undergraduate coursework may be required in order to fulfill prerequisites for graduate study.) While the award may be combined with most other financial aid, there will be no cash refunds or payouts.

Students in the following professional preparation MS programs are eligible to receive the award:

- Instructional Technology
- Literacy Education (Birth - Grade 12)
- Mathematics Education
- Science Education (Earth Science, Biology, Chemistry, or Physics)
- Special Education Programs:
  - Early Childhood Special Education B-2
  - Inclusive Special Education 1-6
  - Inclusive Special Education 7-12 (Generalist)

Inclusive Special Education Severe/Multiple Disabilities

- Teaching English Language Learners (T.E.L.L.)
- Students in the Teaching and Curriculum M.S. program who will be seeking New York State Teacher Certification (on their own) in Science or Math
- Current “non-high needs” M.S. teacher preparation programs taken simultaneously with a documented “high needs” program

Eligible students complete an on-line scholarship application each semester. Scholarships are awarded and credited to student bursar accounts for further information please contact Speranza Migliore (315) 443-2505 or e-gradcrt@syr.edu.

**The High Needs Fields Graduate Student Scholarship**
The Professional Preparation for High Needs Fields Graduate Student Scholarship identifies high-needs areas as science, mathematics, special education, literacy, instructional technology, and teaching English language learners and offers graduate students in these programs scholarships covering a portion of the cost of tuition. The scholarships are available to all qualified full-time master’s students as well as part-time master’s students who are Syracuse City School District employees.

To be eligible, full-time students must be enrolled in one of the programs listed below. Full-time study is defined as registered for 9 credits for spring or fall (or a total of 6 credits for summer) in a program approved by the student’s graduate advisor. Part-time students who are employees of the Syracuse City School District and enrolled in one of the programs listed below also are eligible.

All eligible students must be formally admitted into one of the specified master's programs and maintain satisfactory academic progress toward that degree, which includes attaining and maintaining a 3.0 cumulative grade point average by the end of the second semester in the program. The scholarship does not cover tuition for undergraduate courses even if required as a condition of full admission to the master's program. (Undergraduate coursework may be required in order to fulfill prerequisites for graduate study.) While the award may be combined with most other financial aid, there will be no cash refunds or payouts.

Students in the following professional preparation MS programs are eligible to receive the award:

- Instructional Technology
- Literacy Education (Birth - Grade 12)
- Mathematics Education
- Science Education (Earth Science, Biology, Chemistry, or Physics)
- Special Education Programs:
  - Early Childhood Special Education B-2
  - Inclusive Special Education 1-6
  - Inclusive Special Education 7-12 (Generalist)

Inclusive Special Education Severe/Multiple Disabilities

- Teaching English Language Learners (T.E.L.L.)
- Students in the Teaching and Curriculum M.S. program who will be seeking New York State Teacher Certification (on their own) in Science or Math
- Current “non-high needs” M.S. teacher preparation programs taken simultaneously with a documented “high needs” program

Eligible students complete an on-line scholarship application each semester. Scholarships are awarded and credited to student bursar accounts for further information please contact Speranza Migliore (315) 443-2505 or e-gradcrt@syr.edu.

**School of Education**
Financial Aid and 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.

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

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
- Career Services
- Teacher Certification

Students will be assigned faculty advisors in addition to professional advisors in the Office of Academic and Student Services.

New York State Teacher Certification

**Required for all New York State Teacher Certifications and for all initial certification (teacher preparation) programs:**

ED 640 section titled Safe and Healthy Learning Environments (0 credits for graduate students), 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 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 Masters 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 Bachelor’s Level

- Earn a Masters degree leading to professional certification in area of initial certification.
- Earn a Masters degree in a new certification area.
- Earn a Masters 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).
School 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 315-443-9319.
- 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 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 school districts.

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 opportunity 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.

Community, Collaboration and 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, 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.
- 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 faculty, classrooms and practice space for Music Education.
- Carnegie is home to Math Education.
- Sims houses the Counseling and Human Services Department, and the Psycho-educational evaluation teaching laboratory.
- 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 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
- 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 O. 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

Art Education: Preparation, MS

Contact:
James H. Rolling Jr., Comstock Art Facility Rm 043, 315-443-2355, jrolling@syr.edu

Graduate programs in Art Education are focused upon three distinct areas of study emphasis:
- arts & design practices as a means for personal agency and social responsibility,
- developing arts & design curricula for teaching and learning in multiple contexts,
- and interdisciplinary research promoting creative leadership and entrepreneurship.

The Art Education Preparation M.S. program is one of two master's degree programs in the department, and meets the academic requirements for New York State initial teaching certification in Visual Arts (all grades). This program is designed for students who already have an undergraduate degree in studio art or another discipline outside of teaching with sufficient credits in art, but do not have an education background. This 45 credit hour program awards the M.S. degree from the School of Education, in cooperation with the College of Visual and Performing Arts (VPA). The college’s programs are accredited by the Council for the Accreditation of Educator Preparation and the National Association of Schools of Art and Design. Art Education faculty members hold dual appointments in both the School of Education and the College of Visual and Performing Arts.

The Department of Art Education is housed in the Comstock Art Facility, a building which also features facilities for sculpture, printmaking and ceramics, a foundry, and other various workshop areas. Art Education Preparation students participate as teachers of the Syracuse University Saturday Art Workshops for Young People, and may also contribute to additional community-engaged projects run by the Art Education Department, each serving as a laboratory allowing for valuable firsthand experience prior to the final student teaching internship. Through the School of Education, SU Art Education also works with a number of area teachers and schools who supervise other early field experiences and the two culminating student teaching placements.

The Student Art Education Association at Syracuse University (SAEASU), affiliated with the National Art Education Association, offers opportunities to enrich pedagogical practice by facilitating social and networking opportunities for professional development, hosting guest speakers, and promoting and practicing outreach and community service.

Program requirements
Master's degree courses (45 credits total):
- AED 617 - Philosophy & Foundations of Art Education Practice 3 credit(s)
- AED 510 - Special Problems in Art Ed 1-6 credit(s)
- EDU 778 - Narrative Inquiry in Research and Creative Practice 3 credit(s) or
- AED 798 - Making Methodology: Exploring Arts-based Research 3 credit(s)
- EDU 603 - Introduction to Qualitative Research 3 credit(s)
- SED 640 - Participation in the Professional Development School 0-1 credit(s) (This is taken during each fall and spring semester except the student teaching semester.)
- EDU 601 - Methods and Practice in Teaching Art 4 credit(s)
- AED 621 - Making Meaning: Socially Responsible Arts & Design Practices 3 credit(s)
- RED 625 - Literacy Across the Curriculum 3-4 credit(s)
- EDU 602 - Methods and Curriculum in TeachingArt 4 credit(s)
- EDU 660 - Field Workshop 3-6 credit(s) (topics vary)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) (two different grade levels)

Note:
*EDU 605 and EDU 607 may be replaced with EDU 606 Understanding Teaching & Learning (4)

Intensive Examination
The final requirement of master's degree study also requires the completion of an Intensive Examination. Completing a take-home Master’s Examination can fulfill this requirement. However, with departmental approval, a Master’s thesis or special project is also an option in this program.

Liberal Arts and Art and Design Credits required:
It is expected that students will enter the program with most of these requirements completed. However, if not, all requirements must be completed before a master’s degree can be granted.

Art and design content. This is met by either an undergraduate degree in an appropriate area of art, or a degree in another area with 36 semester hours of art content. The art content should include 9 credits of art history; depth of study in a two-dimensional, three-dimensional, or time based mode of artmaking; and breadth of study through a variety of other studio courses. Typically, a 3.0 average in these courses is required.

Liberal arts distribution. In addition to art history study students are expected to have met with appropriate courses and grades, one course each in mathematics, natural science, social science (not history or psychology), and humanities (not arts related). In addition a writing course or its equivalent is required, and a language other than English requirement must be met by either one college course, successful completion of level 3 or
higher in high school, or appropriate testing.

Art Education:
Professional Certification, MS

Contact:
James H. Rolling Jr., Comstock Art Facility Rm 043, 315-443-2355, jrolling@syr.edu

Graduate programs in art education are operated in accordance with the following purposes, undertakings, and core values: the exploration of the ideas, materials, and aesthetics through which we shape meanings, negotiate identity, and organize society; the development of arts-based and design-oriented curricula promoting multiliteracies, inclusivity, critical inquiry, and social responsibility; the promotion of interdisciplinary and collaborative research opportunities intersecting arts praxis, educational theory, community scholarship, and qualitative methodologies.

Major Requirements
The Art Education: Professional Certification M.S. program is designed for students who seek a master's degree leading to New York State professional certification. This program requires 30 credits of study with either a research or studio arts concentration. The prerequisite to this program is initial New York State teaching certification in visual arts.

The Syracuse University Student Art Education Association (SUSAEA), a chapter of the National Art Education Association, offers opportunities to enrich pedagogical practice by facilitating social and networking opportunities for professional development, hosting guest speakers, and promoting and practicing outreach and community service.

Clinical Mental Health Counseling, MS

Contact:
Linwood G. Vereen, Ph.D., Coordinator of Clinical Mental Health Counseling, Sims Hall Suite 440 315-443-2266, lvereen@syr.edu

Program Description
Master of Science in Clinical Mental Health Counseling prepares professional counselors to offer a broad range clinical mental health counseling services and interventions focused on wellness and advocacy. These range of therapeutic services are designed to enhance the growth and development of all clients and can be delivered in a variety of settings such as community agencies, private practice, residential treatment, community hospitals, Veterans Affairs Clinics, and human service organizations.

Students develop skills in clinical mental health counseling, multicultural/social justice counseling, career counseling, substance abuse services and crisis counseling. Students who graduate from this program meet all educational requirements for the New York State license in clinical mental health counseling (LMHC). After completion of the program, students may apply for a limited permit to practice mental health counseling, while accumulating the required post degree hours to sit for the licensure exam. Students also meet the educational requirements for licensure as a mental health counselor in most other states.

The Department of Counseling and Human Services has been a pioneer in training highly skilled practitioners and leaders in a wide range of counseling settings. Syracuse’s programs are nationally accredited and can lead to national certification or state certification in school counseling or licensure as a clinical mental health counselor.

Programs include extensive fieldwork opportunities in which students gain hands-on experience working with students and clients in a wide range of counseling and educational settings. The faculty is nationally recognized for their leadership in the profession and all classes are taught by skilled experts and experienced clinicians.

The faculty is deeply committed to the growth and development of their students; faculty work closely with both our master's and doctoral students. Training is an ongoing partnership between faculty and students in which students gain hands-on experience working with students and clients in a wide range of counseling and educational settings. The faculty is nationally recognized for their leadership in the profession and all classes are taught by skilled experts and experienced clinicians.

The faculty is deeply committed to the growth and development of their students; faculty work closely with both our master's and doctoral students. Training is an ongoing partnership between faculty and students in which students gain hands-on experience working with students and clients in a wide range of counseling and educational settings. The faculty is nationally recognized for their leadership in the profession and all classes are taught by skilled experts and experienced clinicians.

S.U. Re-Accredited through 2017:
After an extensive review of the Counseling and Human Services Programs, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) recently announced that Syracuse University's programs have met all expectations, and granted us the full eight year accreditation period for all of our accredited master's degree programs (Clinical Mental Health Counseling, School Counseling, and Student Affairs Counseling), as well as our Counselor Education Ph.D. program. This means each of these programs will be accredited by CACREP until 2016. This decision is a testament to the quality education offered here at Syracuse University, and a signal of support for the work that is done here. CACREP accreditation is critical as you compare programs in that counselors must be graduates of a CACREP program as of 2022 to be credentialed as a National Certified Counselor. Accreditation also streamlines licensure and credentialing processes for professional counselors.

Admission
In our admission process, we consider multiple facets of an applicant's portfolio and background because we believe that successful counselors need to be interpersonally skilled, highly self-aware, professionally mature, academically prepared for graduate work, and committed to the values and philosophies of the counseling profession and the Department of Counseling and Human Services at Syracuse University. Therefore, academic, interpersonal, professional, leadership, and personal components are integrated in our admission decision process.

The Department of Counseling and Human Services faculty seeks to admit individuals who are personally and academically prepared to be successful in completing the master's degree program in Counseling. Within these parameters, the faculty is committed to admitting students who represent diverse backgrounds or who have special abilities to serve a diverse population. Admission is highly competitive and conducted three times a year.

Major Requirements
The 60 credit Master of Science degree prepares graduates to successfully pursue licensure in the state of New York and other states and credentialing as a Nationally Certified Counselor. For full-time students, the program is designed to be completed in 2.3 years.

- COU 612 - Professional Orientation & Ethical Practice 3 credit(s)
- COU 614 - Group Work in Counseling 3 credit(s)
- COU 624 - Theories of Counseling 3 credit(s)
- COU 626 - Social and Cultural Dimensions of Counseling 3 credit(s)
- COU 628 - Life-Span Human Development 3 credit(s)
- COU 642 - Career Development 3 credit(s)
- COU 644 - Counseling Prepracticum 3 credit(s)
- COU 645 - Counseling Prepracticum II: Advanced Multicultural Counseling Skills 3 credit(s)
- COU 646 - Assessment in Counseling 3 credit(s)
- COU 651 - Crisis Counseling 3 credit(s)
- COU 675 - Substance Abuse Counseling 3 credit(s)
This may include courses from other Syracuse University programs and colleges, including the Maxwell School of Citizenship and Public Affairs, the S.I. Newhouse School of Public Communications, and the College of Arts and Sciences. At the same time, cohorts of students take courses in the department together so that students share a common vocabulary.

Faculty members are well-known in their fields and actively engaged in ongoing research. The department’s outstanding graduate students collaborate with faculty in research, publishing, and professional activities. The department regularly sponsors opportunities for students and faculty to share their work, discuss current issues, or read and critique current articles. There is a strong emphasis on community amongst scholars.

Major Requirements

The Master of Science degree program in Cultural Foundations of Education is designed to foster and support fundamental inquiry into the nature of education. Students draw on history, philosophy, sociology and other disciplines to analyze such issues in education as inequality, disability, popular culture, mass media, the philosophy of multiculturalism and racism. The program consists of either 30 credits and a Master’s Intensive Exam or 24 credits and a Master’s Thesis (6 credits). In either option there is one required course: EDU 603: Introduction to Qualitative Research.

Graduate students choose Cultural Foundations of Education because each program of study is individually designed. Students may build their work around their own research interests and are encouraged to use diverse research approaches, such as combining philosophical analysis with empirical work or historical research with policy analysis. Cultural Foundations of Education supports interdisciplinary work and students are encouraged to choose courses from across the broad spectrum of Syracuse University’s schools and colleges, including Maxwell School of Citizenship and Public Affairs, the S.I. Newhouse School of Public Communications and the College of Arts and Sciences.

A master’s degree in Cultural Foundations of Education is designed for the student seeking a broad education with disciplinary competence as well as commitments to social purpose and academic excellence.

Early Childhood Special Education, MS

Contact:
Gail Ensher, 150 Huntington Hall, 315-443-9650, glesenher@syr.edu

The Early Childhood Special Education program leads to certification in both general early childhood and early childhood special education, birth through grade 2. This program reflects the most up-to-date thinking about teaching infants, young children, and primary-age children (with or without special needs). The primary goal of the program is to prepare teachers to work effectively with children of a variety of ages and cultural and linguistic abilities, and serve children who live in diverse family systems in a range of home, community, and educational settings. We seek to accomplish this through collaboration and teamwork among professionals of diverse disciplines and in partnership with the families we serve.

The ECSE program draws upon the expertise and scholarship of faculty members who are leaders in the fields of child and family studies, early childhood, special and elementary education, literacy, and other related professional disciplines, including neonatology, physical therapy, speech therapy, and occupational therapy. The program has a long-standing history of providing training that infuses clinical practice with current research. As they study areas such as early assessment and intervention with infants, students work closely with faculty members who have extensive clinical experience. Syracuse ECSE has developed close ties and strong relationships to community educators and other professionals who serve high-needs populations of young children and families.

This program meets the academic requirements for both New York State early childhood birth-grade 2 and students with disabilities birth-grade 2 teaching certificates. We admit:

- students who have backgrounds or certification in one (but not both) of these areas (early childhood or children with disabilities);
- students who have certification in another teacher certification area;
- qualified students who do not have previous education coursework. Each student’s credentials are evaluated on an individual basis, but here are some general guidelines concerning the length of the course of study.

The requirements of this program include several undergraduate liberal arts concentration and/or distribution courses. Each applicant will have undergraduate transcripts reviewed (we encourage this to take place before applying) for the liberal arts requirements listed below. Missing coursework does not need to be completed before applying but must be completed before a degree can be granted.

- A liberal arts major or concentration of at least 30 credits, of which at least 15 credits represent upper division courses. The program does work with students who have non-liberal arts majors to construct a complete an appropriate liberal arts concentration.
- A college writing course completed with a grade of B- or higher or an equivalent.
- Two appropriate college-level mathematics courses, with grades averaging at least B- and neither grade below C.
- A social science course other than psychology or history;
- A humanities course other than history or artistic expression;
- An artistic expression course or significant experience in one or more of the arts, as judged by the program;
• A history course;
• A language other than English (which may be American Sign Language) through the first level of college study. This requirement can also be met through the passing of a Level 3 course of a language in high school.

Those who have an active New York State initial certificate in childhood 1-6 or early childhood B-2 are considered as having met many of the requirements listed above. We do continue to review the writing, mathematics, and natural science requirements.

Sample Curriculum:
As noted above, each student’s program varies according to interests, prior coursework, and professional experience. A program for a student without prior study or certification in Education or Early Childhood might look like the following:

A student with prior background may have courses waived.

First Summer Session
• EED 643 - The Parent/Caregiver-Professional Partnership 3 credit(s)
• EED 654 - Teaching Mathematics, Science and Social Studies in Early Childhood Special Education 3 credit(s)
• SPE 653 - Positive Approaches to Challenging Behaviors 3 credit(s)
• EDU 606 - Understanding Learning and Teaching 4 credit(s)
(Includes field experience)

(If necessary, requirement can be satisfied with online coursework from other institutions - typically for a total of 6 credits)

First Fall Semester
• ELL 625 - Methods of Teaching Literacy to English Language Learners 3 credit(s)
• SPE 520 - Methods and Curriculum in Early Childhood Special Education 3 credit(s) with a 10 hours per week required practicum assignment
• SPE 618 - Augmentation of Communication in the Inclusive Classroom 3 credit(s)
• SPE 706 - Seminar in Early Childhood Special Education 3 credit(s)

Spring Semester
• SPE 623 - Families of Students with Disabilities 3 credit(s)
• SPE 627 - Early Intervention for Children’s Reading Problems 3 credit(s)
• SPE 705 - Practicum in Psychoeducational Evaluation and Planning for Exceptional Children 3-6 credit(s)

6 credits required
Safe and Healthy Learning Environments (0 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. 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. These must be completed before student teaching. May be taken in an earlier term.

• MFT 625 - Family Systems and Therapy 3 credit(s)

Second Summer Session
• EDU 508 - Student Teaching 2-15 credit(s)
• SPE 633 - The High-Risk Infant: Medical Treatment and Educational Interventions 3 credit(s)

Second Fall Semester
• EDU 508 - Student Teaching 2-15 credit(s) Kindergarten and Grades 1-2) 5 credits required.
• SPE 613 - Developmental Therapy for Children with Disabilities 3 credit(s)
• Students complete a portfolio of specified assignments as a culminating experience, including the edTPA and other evidence of professional competence.

Note:
• Students admitted without any certification or prior training in education or special education typically require a total of 60 graduate credits to complete the program.
• Students with appropriate backgrounds may be able to complete fewer graduate credits (no fewer than 36) and possibly one less semester.
• While the ECSE program accepts and seeks to accommodate graduate students who are working, it is essential that working schedules allow day-time hours when required practice and field placements can be satisfied in the fall, spring and summer terms. Otherwise, it is not possible to complete the ECSE degree. We strongly recommend against full-time work and full-time study in the same semester/term.

Educational Leadership, MS
(For International Applicants Only)

Contact:
Joseph Shedd, 150 Huntington Hall, 315-443-2685, jsheddd@syr.edu

The M.S. degree in Educational Leadership is reserved for international students with teaching experience only.

Inherent in the design of the Master of Science in Educational Leadership program is a definition of educational leadership exercised by teachers and other school professionals as well as administrators—a definition that requires our graduate students to grapple with a variety of theoretical and policy perspectives, and challenges them to identify and address the tensions inherent in different ways of understanding the purposes and processes of education.

Major Requirements

Our program reflects these principles by requiring students to confront the demands of providing leadership for learning in both field and academic settings and by expecting them to integrate the insights afforded by each. We meet these objectives by cultivating closer connections between the university and the field, through active involvement of field leaders in the admissions, advising, instruction, and assessment processes, and through intensive involvement of students in a variety of forms of research, development, inquiry, and service in actual school settings.

English Education:
Preparation (7-12), MS

Contact:
Dr. Kelly Chandler-Olcott, 200 Huntington Hall, 315-443-4765, kchandle@syr.edu

Description

The program graduates new professionals who are prepared to teach English language arts, composition and writing, digital literacies, and a wide range of literature to diverse students in grades 7-12. It aligns with the professional standards of the National Council for Teachers of English and the New York State Teaching and Learning Standards. From experiences in university classrooms, online, and in schools and communities, students learn to design inclusive, culturally relevant pedagogy for 21st century classrooms. Graduates understand the key role that English educators play in developing literacy across the curriculum and for life purposes that extend beyond school.

Historically, the Reading and Language Arts department has enjoyed cooperative relationships with area public schools, BOCES, and local companies that permit candidates to gain field experience and, where appropriate, conduct research in school and workplace settings. In addition, English Education maintains a close tie with the other programs in the Reading and Language Arts department.

This program is intended for those with an English major or major equivalent (see below) who
are seeking teaching certification (preparation program). In combination with the English and liberal arts distribution credits described below, it meets the academic requirements for New York State initial teacher certification in English Language Arts for grades 7-12.

Master's Degree Course Requirements

The program requires 35 credits, and may be completed in 12 months, beginning in May. However, students who enter with education study equivalent to one of the courses below may have their syllabi reviewed for waiver of courses. In no case will fewer than 30 graduate credits be required.

(courses with * include field experience)

First Summer
- EDU 606 - Understanding Learning and Teaching 4 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- RED 625 - Literacy Across the Curriculum 3-4 credit(s) * (4 credits required)

Fall - Candidacy Semester
- SED 613 - Methods and Curriculum in Teaching 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) / Candidacy (3 credits) *
- RED 614 - Teaching 21st Century Writers In and Out of School 3 credit(s)
- Safe and Healthy Learning Environments (0 credit), 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.

Spring - Standard Student Teaching Semester
- EDU 508 - Student Teaching 2-15 credit(s) 6 credit(s) *
- RED 512 - Children's and Adolescent Literature 3 credit(s)
- SED 616 - Assessment & Data-Driven Instruction 3 credit(s)

Intensive Examination

A master's degree intensive examination is also required.

Liberal Arts Course requirements

The requirements of this program include several undergraduate science and distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. We help prospective students identify appropriate courses.

Interested students should contact the English Education program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

English Content

This program requires a completed major in English; or a major in another area, with no fewer than 30 English credits before earning a master's degree, with a significant number of those completed before entering the program. For those without a major in English, 18 of the 30 credits must be upper division or its equivalent. A strong complement of writing should be included, with at least 9 credits of writing instruction or writing intensive courses. A limited number of related courses (e.g., journalistic writing; drama history, etc.) from departments other than English will be considered on a course-by-course basis.

Additional Liberal Arts Distribution courses

(one from each, with no grade less than a C):
- Mathematics
- Natural Science
- History
- Social Science (other than history or psychology)
- Artistic Expression (course or equivalent)
- Language other than English, including American Sign Language (completion of high school Foreign Language Level 3 or higher may be substituted.)

Exercise Science, MS

Contact:
Tom Brutsaert, Chair, 201 Women’s Building, 315-443-9696, tbrutsaer@syr.edu

The master's program in exercise science is designed to train students for positions in hospitals and in corporate and private agencies that provide fitness and wellness programming and rehabilitative exercise programs. An emphasis on research in applied physiology also prepares students for doctoral programs in exercise science. Students in exercise science have the opportunity for supplemental study in areas such as nutrition, health promotion, and sports medicine. Because exercise science is functionally related to physical education, physical educators with provisional/initial teaching certification may use graduate study in exercise science to obtain permanent/professional teaching certification.

Major Requirements

The M.S. degree requires 36 credits of formal course work to be selected in consultation with the student's advisor. Three specialty tracks are available through careful selection of electives:
- Exercise Physiology and Fitness
- Clinical Exercise Physiology (including Cardiac Rehabilitation)
- Research in Exercise Physiology

The Master’s degree requires 24 credits including:
- General Biology (8 credits)
- Human Anatomy & Physiology (8 credits)
- Chemistry (8 credits)
- PLUS: 6 credits of exercise science including:
- Physiology of Exercise
- General Science*

Note:
*May be used to constitute a minimum of 24 credits of sciences

Additional Information

Doctoral study with an emphasis in applied exercise physiology is presently offered in conjunction with the School of Education’s Science Education Ph.D. program. This highly individualized doctoral degree in Science Education with a concentration in exercise physiology is a research intensive program offered through the Science Education Department. In addition to course work, students work with their faculty mentor on various research projects. Students are encouraged to contact their potential faculty mentor directly prior to applying.

Higher Education, MS

Contact:
Cathy Engstrom, Chair, 350 Huntington Hall, 315-443-4763, cmengstr@syr.edu

Higher Education focuses on issues of diversity and inclusion, as applied to both the theory and practice of student success, development and learning in higher education. Given the increasing diversity of college student backgrounds, critical reforms are needed in higher education in order to develop diverse curricular and non-curricular structures, practices, policies, and pedagogies that embrace and build upon students’ talents, experiences, and potential so they learn, develop, and succeed. Due to the complexity of the issues facing higher education around the world, students draw on resources in the School of Education and across the University to provide...
an interdisciplinary, foundational perspective supplemented by ongoing, integrated practical experiences. Students analyze higher education at a variety of levels, including individual students, student populations, institutions, and systems of higher education, and the policies and practices related to each that foster the success of all college students.

Major Requirements
Course offerings cover student development and learning; student attainment and retention; race and gender in higher education; student affairs administration; administrative theory and practice in higher education; learning communities; legal issues in higher education and history.

A hallmark of these programs and their coursework is community and collaboration. Many courses require collaborative group work that involves students as active learners in class and in our program learning community. At the same time, the program is structured to promote collaboration among students, faculty, and administrators. Whenever possible, students and faculty will work together on collaborative research and administrative projects.

The Doctoral degree program include coursework throughout the University so students can draw upon the expertise of faculty from departments in the School of Education (e.g., Cultural Foundations of Education) and a variety of schools including the Maxwell School of Citizenship and Public Affairs and the School of Management. Both degree programs also offer field and internship experiences (required for all master's degree students) which are available at the University and a diversity of neighboring institutions. Doctoral students specializing in higher education are required to have a minimum of three years of full-time experience in higher education. Because the department and its faculty have a strong reputation within the field, graduates of the program are typically embraced by a vibrant market offering a variety of positions.

Note:
No more than 6 credits may be taken prior to matriculating into the higher education M.S. degree program. No more than 9 credits post master's degree may be taken before matriculating into the Ph.D. program. All master's students must take a minimum of 9 credits per academic year. All doctoral students must complete 12 credits per academic year.

Inclusive Special Education (Generalist)
Grades 7-12, MS

Contact:
Christine Ashby, 150 Huntington Hall, 315-443-8689, ceashby@syr.edu

The program leading to the master of science (M.S.) degree in Inclusive Special Education (Grades 7-12) Generalist builds on the long and distinguished traditions of inclusive education and disability studies at Syracuse University that examines disability as a social, cultural, and political construct, linked to issues of race, class and gender. A grounding assumption of the program is that students with disabilities must have access to academic instruction and social learning that is available to all students.

Students with no prior study in education, or with a certificate in another area, who are interested in working in supporting roles in grades 7-12 may apply to this program. Master's degree candidates explore innovative approaches to modifying and adapting instruction, curriculum, and classroom structures to maximize active, meaningful participation of all learners. Students in the program participate half days during the Fall and Spring semester in area schools and collaborate on planning, assessment and teaching teams. This intensive fieldwork helps students connect theory and practice. Through coursework students build competencies in using alternative assessments, integrating instructional and assistive technologies, and meeting the social, communication and academic needs of students. Students also learn to regard individuals with disabilities as important sources of knowledge and planning, based on the perspectives of these individuals themselves.

This 30-43 credit program (depending on prior coursework) can accommodate either full-time or part-time students, although availability for student teaching/field placements during the day is necessary. Full time students may complete the program in 15 months, following a summer-fall-spring-summer sequence of courses. A liberal arts concentration and appropriate coursework in core academic areas are also required; students often enter with many of these courses already completed, and have the opportunity to complete remaining courses before, during, or after the graduate coursework.

The program, along with the liberal arts requirements listed below, meets the academic requirements for the New York State Students with Disabilities 7-12 Generalist teaching certificate. There are also application, testing and other requirements for certification.

M.S. in Inclusive Special Education (7-12) Generalist course requirements:
- EDU 606 - Understanding Learning and Teaching 4 credit(s)
- RED 625 - Literacy Across the Curriculum 3-4 credit(s) 4 credits required
- DSP 614 - Critical Issues in Dis/Ability and Inclusion 3 credit(s)
- Safe and Healthy Learning Environments (0 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.
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- SPE 665 - Positive Behavior Supports in Secondary Schools 3 credit(s)
- SPE 634 - Collaboration/Cooperation in Schools 3 credit(s)
- SPE 615 - Seminar in Teaching 1-2 credit(s) (fall) 1 credit required
- EDU 508 - Student Teaching 2-15 credit(s) (fall) 3 credit(s) required
- SPE 724 - Inclusive Professional Practices in Special Education 3 credit(s)
- SPE 644 - Significant Disabilities: Shifts in Paradigms and Practices 3 credit(s)
- SPE 615 - Seminar in Teaching 1-2 credit(s) (spring) 1 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) (spring) 3 credit(s)
- SPE 705 - Practicum in Psychoeducational Evaluation and Planning for Exceptional Children 3-6 credit(s) 3 credit(s) required
- SPE 618 - Augmentation of Communication in the Inclusive Classroom 3 credit(s) or
- SPE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s)
- RED 621 - Literacy Intervention for Special Educators, Grades K-12 3 credit(s)

Culminating Experience
In addition, students must submit a peer reviewed Professional Teaching/Learning Portfolio for evaluation.

Total Credits Required: 30-43 depending on background

Liberal Arts Course requirements/Prerequisites:
The requirements of this program include several undergraduate liberal arts concentration and distribution courses, with no less than a C grade. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. All must be finished before a degree can be granted. The program helps prospective students identify appropriate courses, and encourages interested students to have early contact about these.

Liberal Arts Concentration or Major
A liberal arts concentration or major of at least 30 semester hours, with 15 upper division credits, or equivalent, is required. The program does admit students with college majors in non-liberal arts
areas. The transcript review process includes determining the best concentration area choice and how many additional courses students may need to take. If appropriate, concentration courses may also be used to meet the distribution course requirements listed below.

Distribution course requirements:

- Writing
- Literature
- Mathematics (2 courses)
- Natural Science with laboratory
- Other Natural Science
- Artistic Expression
- History
- Social Science other than History
- Language other than English including American Sign Language (completion of high school Foreign Language Level 3 or higher may be substituted.)

Special Opportunity

Some program applicants also apply to be a SUITR - Syracuse University Urban Teacher Resident, a partnership with the Syracuse City School District. Selected Studies receive an additional stipend that can be used toward tuition, and in return, complete full-day (instead of half day), full semester residency placements in partner schools. The School of Education website gives more details about the SUITR program.

Inclusive Special Education: 1-6 Preparation, MS

Contact:
Christine Ashby, 150 Huntington Hall, 315-443-8689, ceasby@syr.edu

This master's degree program in inclusive special education is designed to prepare students to work with individuals with disabilities in grades 1-6. It meets the academic requirements for initial/professional New York State teacher certification in Students with Disabilities (1-6). Students may complete the 32-credit program either full (in 15 months) or part-time (although daytime availability for field experience and student teaching is required). Applicants must hold or be expected to have met requirements for the New York State initial childhood 1-6 teaching certificate, with all requirements met before beginning the program.

The program builds on the long and distinguished traditions of inclusive education and disability studies at Syracuse University. The philosophies of the program expand on these traditions to examine disability as a social, cultural, and political construct inextricably linked to issues of race, class, and gender. A grounding assumption of the program is that students with disabilities must have access to academic instruction and social learning available to students without disabilities. To this end, students in this program explore innovative approaches to modifying and adapting instruction, curriculum, and classroom structures to maximize each student's strengths and encourage meaningful participation in inclusive classrooms.

M.S. in Inclusive Special Education 1-6 course requirements:

- DSP 614 - Critical Issues in Dis/Ability and Inclusion 3 credit(s)
- SPE 653 - Positive Approaches to Challenging Behaviors 3 credit(s)
- SPE 634 - Collaboration/Cooperation in Schools 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- SPE 600 - Selected Topics 1-6 credit(s) Practicum in Special Education 1 credit required
- SPE 627 - Early Intervention for Children's Reading Problems 3 credit(s)
- SPE 609 - Teaching Children and Adolescents with Autism 3 credit(s) or
- SPE 644 - Significant Disabilities: Shifts in Paradigms and Practices 3 credit(s)
- SPE 705 - Practicum in Psychoeducational Evaluation and Planning for Exceptional Children 3-6 credit(s)
- 3 credit(s) required
- SPE 724 - Inclusive Professional Practices in Special Education 3 credit(s)
- SPE 618 - Augmentation of Communication in the Inclusive Classroom 3 credit(s) or
- SPE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) Inclusive Special Education 1-6 4 credit(s) required

Culminating Experience

In addition, students must submit a Peer-Reviewed Professional Teaching/Learning Portfolio for evaluation.

Total Credits Required: 32

Also required:

Students who obtained their New York teaching certificate before DASA training was required must complete DASA training as part of the degree requirements.
School of Education

- SPE 634 - Collaboration/Cooperation in Schools 3 credit(s)
- SPE 644 - Significant Disabilities: Shifts in Paradigms and Practices 3 credit(s)
- SPE 649 - Practicum in Significant Disabilities 1 credit(s) (at grade level of certification)
- SPE 653 - Positive Approaches to Challenging Behaviors 3 credit(s) or
- SPE 665 - Positive Behavior Supports in Secondary Schools 3 credit(s)
- SPE 705 - Practicum in Psychoeducational Evaluation and Planning for Exceptional Children 3-6 credit(s) 3 credit(s) required
- SPE 690 - Independent Study 1-6 credit(s) (Final Capstone Program Project) 3 credits required

Capstone Project Requirement
The Capstone Project requires a review of research and analysis relating to research on a mutually agreed upon topic (by student and advisor). To complete the Capstone Project, students must register for SPE 690 - Independent Study (3 credits). The study must address at least one of three major proficiency areas in working with students with severe-to-profound disabilities: content knowledge, inclusive and culturally responsive pedagogy; or assessment of student learning. The research paper and supporting data collected during the course of a semester are presented as an in fulfillment of final program requirements.

Elective Courses (Two Required) by Advisement (6 credits)

Examples include:
- DSP 614 - Critical Issues in Dis/Ability and Inclusion 3 credit(s)
- DSP 688 - Social Policy and Disability 3 credit(s)
- COU 723 - Psychological, Social, and Cultural Aspects of Disability 3 credit(s)
- LAW 763 - Disability Law 3 credit(s)
- SPE 609 - Teaching Children and Adolescents with Autism 3 credit(s)
- SPE 633 - The High-Risk Infant: Medical Treatment and Educational Interventions 3 credit(s)
- RED 621 - Literacy Intervention for Special Educators, Grades K-12 3 credit(s)

Total Credits Required: 31

Safe and Healthy Learning Environments Requirement
To be eligible for this New York State teacher certification, students in this program must complete or must have completed training in Child Abuse Prevention, Child Abduction Prevention, Violence Prevention, Fire and Arson Prevention, Prevention of Alcohol, Tobacco, and Drug Abuse, Highway Safety, Dignity for all Students (DASA). One or more of these requirements, if needed, can be completed through a non-credit course, Safe and Healthy Learning Environments. Students who have only the DASA requirement to meet will have opportunity to complete this requirement separately.

Instructional Design, Development and Evaluation, MS

Contact:
Tiffany A. Koszalka, Chair, 259 Huntington Hall, 315-443-3703, takosalk@syr.edu

The Instructional Design, Development and Evaluation Department (IDD&E) offers a variety of programs to help students develop the competencies required to identify and evaluate learning and performance problems and to design, develop, and implement appropriate instructional solutions to these problems. Students develop competencies to conduct instructional analysis, make appropriate design decision, develop instructional materials, implement and evaluate instructional programs, and assess learning. The curriculum includes courses that blend soft technologies (thinking models and theories, strategic planning, IDD&E processes, interpersonal communications, and software) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate non-technology and technology-supported instructional solutions for a variety of educational and professional settings. Certificates are offered in educational technology (15 credits), professional practice in educational technology (24 credits), and instructional design fundamentals (12 credits); a master's of science degree is offered in Instructional Technology for NYS K-12 permanent certification; and M.S., C.A.S., and Ph.D. degrees in Instructional Design, Development and Evaluation, are offered.

Major Requirements
Master's students in the Instructional Design, Development and Evaluation (IDD&E) program are required to take 10 core courses (30 credits) listed below:

- IDE 552 - Digital Media Production 3 credit(s)
- IDE 611 - Technologies for Instructional Settings 3 credit(s)
- IDE 621 - Principles of Instruction and Learning 3 credit(s)
- IDE 631 - Instructional Design and Development I 3 credit(s)
- IDE 632 - Instructional Design and Development II 3 credit(s)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)

- IDE 712 - Analysis for Human Performance Technology Decisions 3 credit(s)
- IDE 761 - Strategies in Educational Project Management 3 credit(s)
- IDE 737 - Advanced Instructional Design 3 credit(s)
- IDE 772 - Educational Technology in International Settings 3 credit(s)

Culminating Master's Degree Portfolio
The program also requires students to complete a culminating master's degree portfolio for the degree.

Instructional Technology, MS

Contact
Tiffany A. Koszalka, Chair, 259 Huntington Hall, 315-443-3703, takosalk@syr.edu

This program is offered by the Instructional Design, Development and Evaluation Department (IDD&E). IDD&E offers a variety of programs to help students develop the skills required to identify and evaluate learning problems and to design and develop appropriate instructional solutions to these problems. Students develop the competencies to apply instructional analysis, design and develop instructional materials, evaluate instructional programs, and assess learning. The curriculum includes courses that blend soft technologies (thinking models and theories, strategic planning, IDD&E processes, interpersonal communications, and software) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate technology-supported instructional solutions for a variety of educational and professional settings. Certificates in educational technology, professional practice in educational technology and instructional design foundations, as well as M.S., C.A.S., and Ph.D. degree programs are also offered.

Major Requirements
The M.S. program in Instructional Technology (IT) is intended for students who have completed prior studies in one or more fields of Pre-K-12 education and who already hold or are eligible for a New York State (NYS) initial teaching certificate. The 30 credit program will advance professional practice by supporting leadership in the integration of technology in learning and enhancement of teaching with technology. Upon successful completion of the IT master's program candidates will be eligible to apply for: New York State initial teacher certification as an Educational Technology Specialist (Pre-K-12). This program also fulfills the requirement for a related master's degree for New York State professional certification in most areas of initial New York State teaching certification.
The following courses and practicums constitute the required curriculum for the MSIT.

**FALL Courses**
- IDE 552 - Digital Media Production 3 credit(s) (T)
- IDE 611 - Technologies for Instructional Settings 3 credit(s) (T)
- IDE 621 - Principles of Instruction and Learning 3 credit(s) (LRN/D/C)
- IDE 631 - Instructional Design and Development I 3 credit(s) (D/C)
- IDE 681 - Instructional Technology K-12 Practicum and Seminar I 1 credit(s) (PRAC)

**SPRING Courses**
- IDE 641 - Techniques in Educational Evaluation 3 credit(s) (E/RCH)
- IDE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s) (T)
- IDE 682 - Instructional Technology K-12 Practicum and Seminar II 1 credit(s) (PRAC)
- IDE 761 - Strategies in Educational Project Management 3 credit(s) (LEAD)

**SUMMER Courses**
- IDE 656 - Computers as Critical Thinking Tools 3 credit(s) (FULLY ONLINE) (T)
- IDE 683 - Instructional Technology K-12 Practicum and Seminar III 1 credit(s) (PRAC)

30 credits / minimum of 1 year to complete, including summer semester

(T=tech; LRN=learning; D=design; C=curriculum; E=evaluation; RCH=research; LEAD=leadership; PRAC=practicum)

**Additional Degree Requirements**
- Present final Master's portfolio for review
- Complete DASA training
- Complete NYS competency test

**Literacy Education: Birth to Grade 12, MS**

**Contact:**
Rachel Brown, 200 Huntington Hall, 315-443-4755, rfbrown@syr.edu

Syracuse University's 30-credit master's program in literacy education, birth through grade 12, reflects the latest thinking about literacy instruction. The program aligns with the professional standards of the International Literacy Association and the New York State Teaching and Learning Standards. Through face-to-face instruction, online experiences, and community-based projects, you will learn to provide culturally responsive literacy instruction in classrooms and in school-wide programs where all students are helped to learn at high levels. The literacy education birth-grade 12 program prepares you for a range of jobs in the field of literacy education. Our graduates become outstanding classroom teachers, literacy specialists, and literacy coaches; with additional preparation, some become faculty members in higher education, school administrators, state department administrators, professional development providers, and language arts consultants. Graduates meet the academic requirements for New York State Literacy Birth - grade 6 and Literacy grades 5-12 teaching certificates.

The program can be pursued full time over a year, in a fall-spring-summer sequence, or part time over several years. It is open only to those who hold or will qualify before beginning the program for a New York State initial teaching certificate in another certificate title.

**Program Requirements**

**Total Credits Required: 30**

**Required Courses**
- RED 512 - Children's and Adolescent Literature 3 credit(s)
- RED 613 - Teaching Comprehension 3 credit(s)
- RED 614 - Teaching 21st Century Writers In and Out of School 3 credit(s)
- RED 615 - Teaching Academic Writing in K-12 Classrooms 3 credit(s)
- RED 616 - Academic Language and Reading 3 credit(s)
- RED 626 - Early Intervention for Children's Reading Problems 3 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- RED 629 - Data-Driven Early Literacy Intervention and Coaching 3 credit(s)
- RED 747 - Literacy Clinic 6 credit(s)
- IDE 552 - Digital Media Production 3 credit(s)
- IDE 611 - Technologies for Instructional Settings 3 credit(s)
- IDE 621 - Principles of Instruction and Learning 3 credit(s)
- IDE 631 - Instructional Design and Development I 3 credit(s)
- IDE 681 - Instructional Technology K-12 Practicum and Seminar I 1 credit(s)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)
- IDE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s)
- IDE 682 - Instructional Technology K-12 Practicum and Seminar II 1 credit(s)
- IDE 761 - Strategies in Educational Project Management 3 credit(s)
- IDE 656 - Computers as Critical Thinking Tools 3 credit(s) (FULLY ONLINE)
- IDE 683 - Instructional Technology K-12 Practicum and Seminar III 1 credit(s)

30 credits / minimum of 1 year to complete, including summer semester

(T=tech; LRN=learning; D=design; C=curriculum; E=evaluation; RCH=research; LEAD=leadership; PRAC=practicum)

**Additional Degree Requirements**
- Present final Master's portfolio for review
- Complete DASA training
- Complete NYS competency test

**Literacy Education: Birth to Grade 12, MS**

**Contact:**
Joanna Masingila, 230 Huntington Hall, 315-443-4751, jomasing@syr.edu

The School of Education, in cooperation with the Department of Mathematics, in the College of Arts and Sciences, offers a preparation program leading to the degree of Master of Science in Mathematics Education: Preparation 7-12. The program prepares students to become mathematics educators in 21st century classrooms, who are proficient in five areas:

- Critical reflection and explanations of practice.
- Content knowledge.
- Inclusive and culturally relevant pedagogy.
- Assessment of student learning and development of mathematical literacy.
- Professional conduct and collaboration.

The preparation program is designed for students who have attained a bachelor's degree with a major in mathematics or its equivalent, and seek initial New York State certification to teach mathematics in grades 7-12. The program aligns with the professional standards of the National Council of Teachers of Mathematics and the New York State Teaching and Learning Standards. Full time study is required.

For those students who already have initial certification to teach grades 7-12 mathematics, the School of Education offers a program leading to the degree of Master of Science in Teaching and Curriculum. Students may have a concentration in mathematics education through this program, which is designed to support professional development for teachers and to enhance understanding of the theories and practices associated with teaching.

**Master's Degree Course Requirements**

The program requires 30-38 credits, and may be completed in 15 months, beginning in May. Students who enter with education study equivalent to one of the courses below may have their syllabi reviewed for waiver of courses. In no case will graduate credits required be below 30.
First Summer
- EDU 606 - Understanding Learning and Teaching 4 credits* *
- ELL 645 - Issues in Educating English Language Learners 3 credits
- RED 625 - Literacy Across the Curriculum 3-4 credits 4 credits required*

Fall - Candidacy Semester
- SED 613 - Methods and Curriculum in Teaching 3 credits
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credits
- EDU 508 - Student Teaching 2-15 credits (3 credits required) *
- Mathematics Course (3 credits)
- Safe and Healthy Learning Environments (0 credits), 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.

Spring - Standard Student Teaching Semester
- EDU 508 - Student Teaching 2-15 credits (6 credits required) *
- SED 616 - Assessment & Data-Driven Instruction 3 credits

Second Summer
- Mathematics course (3 credits)
- Mathematics education course (3 credits)

Intensive Examination
A written master's degree intensive examination is also required.

Liberal Arts Course requirements
The requirements of this program include several undergraduate mathematics and distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. We help prospective students identify appropriate courses.

Interested students should contact the Mathematics Education program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Mathematics Content
This program requires either a completed mathematics major of 33 or more credits, including 12 credits of calculus, 3 credits of linear algebra, and 3 credits of analysis; or a major in another area, with at least 30 credits of major-level mathematics courses (calculus and above) at entry, including 12 credits of calculus, 3 credits of linear algebra, and 3 credits of analysis. Both groups must have a total of 36 credits minimum of major-appropriate mathematics courses before a degree can be granted.

Additional Liberal Arts Distribution study
(typically one from each, with no grade less than a C):
- Writing (course or equivalent)
- Natural Science
- Humanities (other than history or arts related)
- History
- Social Science (other than history or psychology)
- Artistic Expression (course or equivalent)
- Language other than English including American Sign Language (successful completion of high school language Level 3 or higher may be substituted).

Media & Education, MA

Contact
Michael Schoonmaker, Co-director, M&E; Chair, TRF; msschoon@syr.edu. 315-443-2150
Jeffrey Mangram Co-director, M&E; Program Coordinator, Social Studies Education, jamangra@syr.edu
Administrative assistant for program, Maryann Barker, mbarker@syr.edu, 315-443-3343

Description
This program brings together the fields of media and education, and is offered jointly by the School of Education and the S.I. Newhouse School of Public Communications. Using broad definitions, we see media as an umbrella term for a range of forms that communicate to a public and we define education as occurring in both formal settings like schools and informal arenas like popular culture. This program addresses media production and analysis in relation to visual storytelling, combining an analysis of core issues in education with visual storytelling creation and production skills. The program will also speak to the cultural terrain of how people both make and make sense of media.

Program Requirements

The MA degree explores areas such as:
- Media Education: educating teachers of media, including media literacy educators, community college professors, or those with an interest in film including licensed/certified K-12 teachers, in short those who want to bring the art of visual storytelling to educational settings.
- Youth Development: addressing the field of education that takes place outside schools. It includes youth development community projects and youth media organizations.
- Media Literacy: teach future educators of media literacy from a cultural studies perspective, which includes a tripartite focus on the text, the audience, and the political economy.
- Leadership in the Field: propelling some students to move on to doctoral studies and further research in the academy.

Admission:
The MA program will follow Syracuse University’s general guidelines for admission of graduate study. That is, applicants must present respectable evidence of excellence with depth and dimension in their records. The review committee expects to admit students with an exemplary transcript, extraordinary letters of recommendation, a personal statement that reflects potential growth, and a demonstrated experience in education and/or media studies.

Financial Support:
The program will draw upon traditional graduate assistantship awards and scholarships. Furthermore, numerous scholarships are awarded to students whose backgrounds may have placed them at a disadvantage in academic and professional fields.

Learning Outcomes:
The program has three goals:
- To teach students how to understand, interpret and demystify media and popular culture.
- To have them create media in relation to education, broadly conceived.
- To understand the social and political contexts of media in relation to education.

Requirements:
Note: This program requires full time study except for the second summer session which requires only 3 credits.

First summer - Summer Session II
Summer Institute (7 Credits):
- TRF 655 - Screenwriting and Production
Workshop 3 credit(s)
- EDU 603 - Introduction to Qualitative Research 3 credit(s)
- M&E 610 - Media and Education Master's Colloquium 1 credit(s)

This colloquium will create community and introduce students to legal, cultural and institutional issues in this field.

Fall Semester (13 Credits):

The visual media electives expose students to both old and new visual media, focusing in both courses on storytelling skills. The educational courses engage students on how educational projects are culturally situated. The colloquium during this semester emphasizes the development of an idea for the capstone project.

- M&E 610 - Media and Education Master's Colloquium 1 credit(s)

Cultural Foundations Elective - (3 credits) One course from:
- CFE 605 - Race, Philosophy and Education 3 credit(s)
- CFE 614 - Critical Issues in Diversity and Inclusion 3 credit(s)
- CFE 631 - Introduction to Sociology and Anthropology of Education 3 credit(s)
- CFE 776 - Gender, Education & Culture 3 credit(s)

Visual Media Elective I - (3 credits) One course from:
- COM 600 - Selected Topics 1-6 credit(s)
- ICC 565 - Designing Interactivity 3 credit(s)
- TRF 642 - Television Production Workshop 3 credit(s)
- TRF 648 - Producing Radio: On Air to Online 3 credit(s)
- TRF 651 - Filmmaking 3 credit(s)
- TRF 653 - Short-form Production 3 credit(s)
- TRF 654 - Music Recording 3 credit(s)
- TRF 656 - Sound for Picture 3 credit(s)
- TRF 659 - Documentary Production 3 credit(s)

Education Elective - (3 credits) One course from:
- EDU 610 - The American School 3 credit(s)
- CFE 621 - History of Education in the United States 3 credit(s)
- CFE 640 - Inequality and Intergroup Relations in Education 3 credit(s)
- CFE 775 - Gender, Sexuality, and Disability 3 credit(s)
- DSP 930 - Sociology and Anthropology of Music

Education: Seminar in Special Topics 3 credit(s)
- IDE 651 - Message Design for Digital Media 3 credit(s)
- IDE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s)
- RED 607 - Issues in Multicultural Literacy 3 credit(s)
- EDU 778 - Narrative Inquiry in Research and Creative Practice 3 credit(s)

Public Communications Elective - (3 credits) One course from:
NOTE: Students are invited to petition public communications electives not on this list along with a rationale for using them in their program of study.
- COM 646 - Media and Diversity 3 credit(s)
- COM 755 - Communications Theory 3 credit(s)
- TRF 640 - Topics in Critical and Historical Perspectives 3 credit(s)
- TRF 683 - Communications Industry Frontiers 3 credit(s)

Spring Semester (13 Credits):

- CFE 662 - Youth, Schooling and Popular Culture 3 credit(s)
- M&E 610 - Media and Education Master's Colloquium 1 credit(s)

Spring semester colloquium focuses on the research and design of the summer capstone projects.
- M&E 611 - Proseminar in Media and Education 3 credit(s)

Pro-seminar covers the perspectives of Media and Education professionals. Students will develop the theoretical groundwork and documentation for their capstone projects. This covers legal issues in media education including copyright issues related to use of media in schools and education law relating to media and education

Culture Study Elective - (3 credits) One course from:
- ANT 672 - Language, Culture, and Society 3 credit(s)
- PSC 753 - International Political Economy 3 credit(s)
- TRF 530 - Popular Culture Studies 3 credit(s)
- WGS 652 - Feminism and Postcolonial Studies 3 credit(s)
- ANT 553 - Women and Social Change 3 credit(s)

Visual Media Elective II - (3 credits) One course from:
For their visual media elective, students may enroll in any of the courses listed under Visual Media Elective I listed above, or the following courses if they have the necessary prerequisite.
- TRF 600 - Selected Topics 1-6 credit(s) Section title: Human-Computer Interaction
- TRF 662 - Advanced TV Production 3 credit(s)
- TRF 668 - Advanced Audio 3 credit(s)
- TRF 669 - Advanced Filmmaking 3 credit(s)

Summer Session I Finish (3 Credits):
- M&E 689 - Media & Education Capstone 3 credit(s)

Total Credits: 36

Transfer Credit:
Decisions made on a case-by-case basis up to a maximum of 6 credits.

Satisfactory Progress:
3.0 (B or better) average in all program courses.

Music Education Preparation, MS

Contact:
Elisa Macedo Dekaney, Coordinator, Music Education, 109 Crouse College, 315-443-4854, emdekane@syr.edu
Speranza Migliore, Graduate Admissions Recruiter, School of Education, 111 Waverly Avenue, Suite 230, 315-443-2505, e-gradrcrt@syr.edu

Description
The Music Education Program at Syracuse University is consistent in its mission to provide an environment of excellence where students can develop the understanding and skills necessary to become competent, independent teachers of music. Our program provides students with opportunities to nurture and develop optimal teaching competencies and artistry and musicianship, as well as philosophical, theoretical, and historical perspectives of music and music education through research and reflective practice.

The School of Education, in cooperation with the Setnor School of Music in the College of Visual and Performing Arts, offers a preparation program leading to the M.S. degree in music education. The preparation program is designed for students who have earned a bachelor's degree in music (i.e., with a major field in music) from a program accredited by the National Association of Schools of Music (NASM), and seek certification to teach music at the elementary and secondary school levels. The program prepares students to become music educators proficient in five areas:
- critical reflection and explanation of practice
- content knowledge
- inclusive and culturally responsive pedagogy
Program of study includes the following:

- assessment of student learning and professional conduct and collaboration.

This degree program provides meaningful opportunities for professional enhancement through comprehensive practice experiences in the field, exposure to current instructional technology with applications to music education, thoughtful examination of music research, and encouragement of continuing personal artistic growth. By providing knowledge and understanding of inclusive and diverse environments, and striving to promote a developed awareness of individual needs and social justice, we prepare our graduates to create learning environments that ensure successful outcomes for all students.

**Program Features:**

- Prepares students for New York State (NYS) initial certification as music teachers at all grade levels as they earn master's degrees within one and one-half to two years;
- A 47-credit minimum program designed for full-time study, that exposes students to cutting-edge ideas in education in courses taught by faculty specialists, and offers students opportunities to expand content knowledge and develop artistic abilities through graduate music courses and performance events;
- Special emphasis on these areas: serving diverse student populations, using latest technologies to promote active learning; developing skills in assessing student learning; and developing a knowledge of music for effective teaching and performance;
- Five field placements, allowing each candidate to learn from experiences in urban, rural, and suburban school settings, from contact with a variety of teaching professionals, and by working with students of diverse backgrounds and abilities;
- Professional development opportunities through shared experiences in core courses with a cohort of music education students as well as students from other secondary programs;
- Participation in the Music Educators Academy, whose weekly meetings bring candidates together with area teachers, educational professionals, and SU faculty and staff to share professional development opportunities and;
- A music education faculty whose location in the Setnor School of Music affords opportunities for formal and informal interactions, and for continued study with accomplished musicians from diverse fields of music.

**Additional Degree Requirements**

The requirements of this program include several undergraduate liberal arts distribution courses. Although some may have been completed at the time of application, it is not unusual for students to have one or more of these left to complete with appropriate grades, before a master's degree can be granted. These include:

- A writing course or equivalent
- A social science course other than history or psychology
- A humanities course that is not arts related (can include history)
- One mathematics course
- One natural sciences course
- 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.

### Total Minimum Credits: 47

**Degree Awarded:** M.S. in Teacher Preparation

**Music Education Professional Certification, MS**

**MMus**

**Contact:**

Elisa Macedo Dekaney, Coordinator, Music Education, 109 Crouse College, 315-443-4854, emdekane@syr.edu

Speranza Migliore, Graduate Admissions Recruiter, School of Education, 111 Waverly Avenue, Suite 230, 315-443-2505, e-gradrcrt@syr.edu

**Description**

The music education graduate degree program is designed for students who will have met all requirements for a New York State Music teaching certificate at the time of entry into the program. This one-year music education professional certification program (Master of Music-M.Mus degree) provides an environment of excellence under which one can continue to develop the understanding and skills necessary to become a competent, independent teacher of music.

The Master of Music (M.Mus) in Music Education allows for the concentration of graduate study with the possibility of degree completion within a one-year period (including some summer study).

**Program Requirements**

**Required Courses**

- MUE 615 - Introduction to Research in Music Education 3 credit(s)
- MUE 616 - Psychological and Sociological Aspects of Music 3 credit(s)
- MUE 618 - Current Problems in Music Education 3 credit(s)
- MTC 646 - Advanced Tonal Analysis 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s)
- RED 625 - Literacy Across the Curriculum 3-4 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- Student Teaching Seminar
- Safe and Healthy Learning Environments (0 credit), 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.

Additional Degree Requirements

The requirements of this program include several undergraduate liberal arts distribution courses. Although some may have been completed at the time of application, it is not unusual for students to have one or more of these left to complete with appropriate grades, before a master's degree can be granted. These include:

- A writing course or equivalent
- A social science course other than history or psychology
- A humanities course that is not arts related (can include history)
- One mathematics course
- One natural sciences course
- 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.

**Total Credits Required: 33**
**School of Education**

**Contact:**
Elisa Macedo Dekaney, coordinator, music education, 109 Crouse College, 315-443-4854, emdekaney@syr.edu

Speranza Migliore, Graduate Admissions Recruiter, School of Education, 111 Waverly Avenue, Suite 230, 315-443-2505, e-gradrcrt@syr.edu

**Description**
The music education graduate degree program is designed for students who will have met all requirements for a New York State Music teaching certificate at the time of entry into the program. This one-year music education professional certification program (Master of Music-M.Mus degree) provides an environment of excellence under which one can continue to develop the understanding and skills necessary to become a competent, independent teacher of music.

The Master of Science (M.S.) in Music Education allows for the concentration of graduate studies to focus on education and music education coursework with the possibility of degree completion within a one-year period (including some summer study).

**Program Requirements**

**Required Courses**
- MUE 615 - Introduction to Research in Music 3 credit(s)
- MUE 616 - Psychological and Sociological Aspects of Music 3 credit(s)
- MUE 618 - Current Problems in Music Education 3 credit(s)
- MTC 646 - Advanced Tonal Analysis 3 credit(s)
- One Graduate Music History Course 3 credits
- Three Graduate Education Courses 9 credits
- Graduate Music Education Courses 6 credits
- Graduate Music Course 3 credits

**Additional Degree Requirements**
- In addition students must complete either a master's thesis or a comprehensive evaluation examination.

Students who obtained their New York teaching certificate before DASA training was required must complete DASA training as part of degree requirements.

**Total Credits Required: 33**

**School Counseling, MS**

**Contact**
Melissa Luke, Ph.D., Sims Hall, Suite 440, 315-443-2266, mluke@syr.edu

**Core Faculty**
- Dr. Nicole R. Hill, Department Chairperson
- Dr. James Bellini, Professor
- Dr. Jason Duffy, Visiting Assistant Professor
- Dr. Melissa Luke, Professor
- Dr. Derek Seward, Associate Professor
- Dr. Linwood G. Vereen, Associate Professor

**Program Description**
The Master of Science in School Counseling prepares students to work with children of all ages in urban, rural and suburban K-12 school settings. Beginning with their first courses, students gain practical hands-on experiences that prepare them for their clinical placements in schools. Students work closely with their advisor to develop a program of study that meets their interests and specific career goals. Through two unique school counseling specialty courses, students acquire the knowledge and abilities necessary to implement a comprehensive, developmental school counseling program that includes individual and group counseling, large group classroom guidance, advisement and consultative services, as well as systemic support skills. Students gain the tools necessary to be effective professional school counselors and change agents, so they can help to meet the needs of every student. Graduates from our program meet the requirements for provisional certification as a school counselor in New York State and are employed in schools as:

- School Counselors
- Directors of Guidance
- Career Center Counselors
- Admissions Counselors
- Support Service Counselors
- Alcohol-Drug Abuse Prevention Education Program (ADAPEP) Counselors
- Student Assistance Counselors
- Family Support Counselors

The Department of Counseling and Human Services has been a pioneer in training highly skilled practitioners and leaders in a wide range of counseling settings. Syracuse University's programs are nationally accredited and can lead to national certification or State Certification in School Counseling or Licensure as a Clinical Mental Health Counselor.

**S.U. Re-Accredited through 2017:**
After an extensive review of the Counseling and Human Services Programs, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) recently announced that Syracuse University's programs have met all expectations, and granted us the full eight year accreditation period for all of our accredited master's degree programs (Clinical Mental Health Counseling, School Counseling, and Student Affairs Counseling), as well as our Counselor Education Ph.D. program. This means each of these programs will be accredited by CACREP until 2017. This decision is a testament to the quality education offered here at Syracuse University, and a signal of support for the work that is done here. CACREP accreditation is critical as you compare programs in that counselors must be graduates of a CACREP program as of 2022 to be credentialed as a National Certified Counselor. Accreditation also streamlines licensure and credentialing processes for professional counselors.

**Admission**
In our admission process, we consider multiple facets of an applicant's portfolio and background because we believe that successful counselors need to be interpersonally skilled, highly self-aware, professionally mature, academically prepared for graduate work, and committed to the values and philosophies of the counseling profession and the Department of Counseling and Human Services at Syracuse University. Therefore, academic, interpersonal, professional, leadership, and personal components are integrated in our admission decision process.

The Department of Counseling and Human Services faculty seeks to admit individuals who are personally and academically prepared to be successful in completing the master's degree program in Counseling. Within these parameters, the faculty is committed to admitting students who represent diverse backgrounds or who have special abilities to serve a diverse population. Admission is highly competitive and conducted three times a year.

**Major Requirements**
The Master of Science in School Counseling is a 48 credit hour program.

- COU 612 - Professional Orientation & Ethical Practice 3 credit(s)
- COU 614 - Group Work in Counseling
The multidisciplinary nature of the department gives students numerous opportunities to interact with researchers in education in the natural sciences through collaborative projects and programs in the School of Education, the College of Arts and Sciences, and the State University of New York College of Environmental Science and Forestry. For decades, the department has been a national leader in promoting science literacy by advancing the knowledge base for effective science teaching and learning at all levels of education. We are well known for our commitment to both components of a seamless tradition: inquiry-based, student-centered science teaching and cutting edge research in pursuit of effective educational practices. We subscribe to the guiding principles that underlie the Next Generation Science Standards::

- children are born investigators;
- a focus on core scientific ideas and practices;
- understanding develops over time;
- science requires both knowledge and practice;
- science education should connect students’ interest and experiences;
- all students should be provided with equitable opportunities to learn science and become engaged in science practices.

The program prepares students to become science educators in 21st century classrooms, who are proficient in five areas:

- Critical reflection and explanations of practice.
- Content knowledge.
- Inclusive and culturally relevant pedagogy.
- Assessment of student learning and development of scientific literacy.
- Professional conduct and collaboration.

The M.S. in Science/Biology Education, in combination with the science and liberal arts distribution credits described below, meets the academic requirements for New York State initial teacher certification in Biology 7-12. There are also application, tests, and other requirements.

Master's Degree Course Requirements

The program requires 36 credits, and may be completed in 15 months, beginning in May. However, students who enter with education study equivalent to one of the courses below may have their syllabi reviewed for waiver of courses. In no case will fewer than 30 graduate credits be required.

First Summer
(courses with * include field experience)

- EDU 606 - Understanding Learning and Teaching 4 credit(s) *
- RED 625 - Literacy Across the Curriculum 3-4 credit(s) required*
- SCE 718 - Curriculum Problems in Science 3 credit(s)
- Science Education Course (3 credits)

Fall - Candidacy Semester

- SCE 613 - Methods and Curriculum in Teaching Science 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) (3 credits) *
- Safe and Healthy Learning Environments (0 credit), 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.

Spring - Standard Student Teaching Semester

- EDU 508 - Student Teaching 2-15 credit(s) (6 credits) *
- SCE 616 - Assessment & Data-Driven Instruction 3 credit(s)

Second Summer

- SCE 614 - The Nature of Science in Science Education 3 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- Science research experience (may be completed in an earlier term) 1 credit

Intensive Examination

A master's degree intensive examination is also required.

Liberal Arts Course requirements

The requirements of this program include several undergraduate science and liberal arts distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. We help prospective students identify appropriate courses.

Interested students should contact the program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Science Content

This program requires: A major in biology or chemistry or earth science; OR by the end of the MS program, a minimum of 30 semester hour
School of Education

Sharon Dotger, 107 Heroy Geology Lab, 315-443-9137, sdotger@syr.edu

Description
A master's degree program in science/chemistry education is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). Our certification programs combine multiple clinically rich field experiences with campus-based coursework emphasizing theoretical and practical knowledge in research-based science teaching and learning.

The multidisciplinary nature of the department gives students numerous opportunities to interact with researchers in education in the natural sciences through collaborative projects and programs in the School of Education, the College of Arts and Sciences, and the State University of New York College of Environmental Science and Forestry. For decades, the department has been a national leader in promoting science literacy by advancing the knowledge base for effective science teaching and learning at all levels of education. We are well known for our commitment to both components of a seamless tradition: inquiry-based, student-centered science teaching and cutting edge research in pursuit of effective educational practices. We subscribe to the guiding principles that underlie the Next Generation Science Standards:

- Children are born investigators;
- A focus on core scientific ideas and practices;
- Understanding develops over time;
- Science requires both knowledge and practice;
- A focus on core scientific ideas and practices;
- Professional conduct and collaboration.

The program prepares students to become science educators in 21st century classrooms, who are proficient in five areas:

- Critical reflection and explanations of practice.
- Content knowledge.
- Inclusive and culturally relevant pedagogy.
- Assessment of student learning and development of scientific literacy.
- Professional conduct and collaboration.

The M.S. in Science/Chemistry Education, in combination with the science and liberal arts distribution credits described below, meets the academic requirements for New York State initial teacher certification in Chemistry 7-12. There are also application, tests, and other requirements.

Master's Degree Course Requirements
The program requires 36 credits, and may be completed in 15 months, beginning in May. However, students who enter with education study equivalent to one of the courses below may have their syllabi reviewed for waiver of courses. In no case will fewer than 30 graduate credits be required.

First Summer
(courses with * include field experience)
- EDU 606 - Understanding Learning and Teaching 4 credit(s) *
- RED 625 - Literacy Across the Curriculum 3-4 credit(s) required *
- SCE 718 - Curriculum Problems in Science 3 credit(s) or
- Science Education Course (3 credits)

Fall - Candidacy Semester
- SCE 613 - Methods and Curriculum in Teaching Science 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) (3 credits) *
- Safe and Healthy Learning Environments (0 credit), 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.

Spring - Standard Student Teaching Semester
- EDU 508 - Student Teaching 2-15 credit(s) (6 credits) *
- SCE 616 - Assessment & Data-Driven Instruction 3 credit(s)

Second Summer
- SCE 614 - The Nature of Science in Science Education 3 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- Science research experience (may be completed in an earlier term) 1 credit

Intensive Examination
A master's degree intensive examination is also required.

Liberal Arts Course requirements
The requirements of this program include several undergraduate science and liberal arts distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the
graduate program, and all must be finished before a degree can be granted. We help prospective students identify appropriate courses.

Interested students should contact the program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Science Content

This program requires: A major in biology or chemistry or earth science; OR by the end of the MS program, a minimum of 30 semester hour credits in the science area in which certification is sought, with at least 18 credits beyond the introductory level, including at least two laboratory courses, with one laboratory beyond the introductory level. Courses from departments other than these science areas (e.g., engineering science) will be evaluated on an individual basis for appropriate science content to be used toward the 30 credits. A sufficient amount of science must be completed before beginning the program. Appropriate science content courses taken during the program may count toward the minimum requirement. Specific courses that must be included for those without a science major include:

Students without a biology major seeking biology certification must have completed coursework with some attention to three areas: organismic biology, genetics/molecular/cell biology; population biology/ecology.

Students without a chemistry major seeking chemistry certification must have completed courses with some attention to inorganic, organic, analytical, and physical chemistry - including engineering.

Students without a geology or earth sciences major seeking earth science certification must have completed courses with some attention to earth history, palaeontology, mineralogy, structural geology, hydrology, and glacial geology. Earth science courses may include courses in geology, meteorology, and astronomy including applied courses in subjects such as soils or limnology.

Students without a physics major seeking physics certification must have completed courses with some attention to mechanics, electricity, thermodynamics, and modern physics such as relativity, kinetic theory, quantum theory, etc. Other courses might include such topics as optics, circuits, or particle physics.

Liberal Arts Distribution courses

(one each, with no grade less than a C)

- Writing (course or equivalent)
- Mathematics
- History
- Social Science (other than history or psychology)
- Artistic Expression (course or equivalent)
- Humanities other than history or artistic expression
- Language other than English including American Sign Language (Completion of a high school Foreign Language Level 3 or higher may be substituted.)
- Assessment of student learning and development of scientific literacy.
- Professional conduct and collaboration.

The M.S. in Science/Earth Science Education, in combination with the science and liberal arts distribution credits described below, meets the academic requirements for New York State initial teacher certification in Earth Science 7-12. There are also application, tests, and other requirements.

Science/Earth Science Education: Preparation (7-12), MS

Contact:
John W. Tillotson, 112 Heroy Geology Lab, 315-443-9137, jwtillot@syrc.edu

Description

A master's degree program in science/earth science education is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). Our certification programs combine multiple clinically rich field experiences with campus-based coursework emphasizing theoretical and practical knowledge in research-based science teaching and learning. Faculty members are dual professors in the Teaching and Leadership Program in the School of Education and in the Department of Science Teaching in the College of Arts and Sciences. The multidisciplinary nature of the department gives students numerous opportunities to interact with researchers in education in the natural sciences through collaborative projects and programs in the School of Education, the College of Arts and Sciences, and the State University of New York College of Environmental Science and Forestry. For decades, the department has been a national leader in promoting science literacy by advancing the knowledge base for effective science teaching and learning at all levels of education. We are well known for our commitment to both components of a seamless tradition: inquiry-based, student-centered science teaching and cutting edge research in pursuit of effective educational practices. We subscribe to the guiding principles that underlie the Next Generation Science Standards:

- Critical reflection and explanations of practice.
- Understanding develops over time; science requires both knowledge and practice; science education should connect students' interest and experiences; all students should be provided with equitable opportunities to learn science and become engaged in science practices.

The program prepares students to become science educators in 21st century classrooms, who are proficient in five areas:

- Critical reflection and explanations of practice.
- Content knowledge.
- Inclusive and culturally relevant pedagogy.

Fall - Candidacy Semester

- SCE 613 - Methods and Curriculum in Teaching Science 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) (3 credits) *
- Safe and Healthy Learning Environments (0 credit), 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.

Spring - Standard Student Teaching Semester

- EDU 508 - Student Teaching 2-15 credit(s) (6 credits) *
- SCE 616 - Assessment & Data-Driven Instruction 3 credit(s)

Second Summer

- SCE 614 - The Nature of Science in Science Education 3 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)


- Science research experience (may be completed in an earlier term) 1 credit

Intensive Examination
A master's degree intensive examination is also required.

Liberal Arts Course requirements
The requirements of this program include several undergraduate science and liberal arts distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. We help prospective students identify appropriate courses. Interested students should contact the program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Science Content
This program requires: A major in biology or chemistry or earth science; OR by the end of the MS program, a minimum of 30 semester hour credits in the science area in which certification is sought, with at least 18 credits beyond the introductory level, including at least two laboratory courses, with one laboratory beyond the introductory level. Courses from departments other than these science areas (e.g., engineering science) will be evaluated on an individual basis for appropriate science content to be used toward the 30 credits. A sufficient amount of science must be completed before beginning the program. Appropriate science content courses taken during the program may count toward the minimum requirement. Specific courses that must be included for those without a science major include:

Students without a biology major seeking biology certification must have completed coursework with some attention to three areas: organismic biology, genetics/molecular/cell biology; population biology/ecology.

Students without a chemistry major seeking chemistry certification must have completed courses with some attention to inorganic, organic, analytical, and physical chemistry - including engineering.

Students without a geology or earth sciences major seeking earth science certification must have completed courses with some attention to earth history, paleontology, mineralogy, structural geology, hydrology, and glacial geology. Earth science courses may include courses in geology, meteorology, and astronomy including applied courses in subjects such as soils or limnology.

Students without a physics major seeking physics certification must have completed courses with some attention to mechanics, electricity, thermodynamics, and modern physics such as relativity, kinetic theory, quantum theory, etc. Other courses might include such topics as optics, circuits, or particle physics.

Liberal Arts Distribution courses
(one each, with no grade less than a C)
- Writing (course or equivalent)
- Mathematics
- History
- Social Science (other than history or psychology)
- Artistic Expression (course or equivalent)
- Humanities other than history or artistic expression
- Language other than English including American Sign Language (Completion of a high school Foreign Language Level 3 or higher may be substituted.)

Science/Physics Education: Preparation (7-12), MS

Contact:
John W. Tillotson, 112 Heroy Geology Lab, 315-443-9137, jwtilton@syr.edu

Description
A master's degree program in science/physics education is available for those with no education background seeking New York State teacher certification for grades 7-12 (preparation program). Our certification programs combine multiple clinically rich field experiences with campus-based coursework emphasizing theoretical and practical knowledge in research-based science teaching and learning, Faculty members are dual professors in the Teaching and Leadership Program in the School of Education and in the Department of Science Teaching in the College of Arts and Sciences.

The multidisciplinary nature of the department gives students numerous opportunities to interact with researchers in education in the natural sciences through collaborative projects and programs in the School of Education, the College of Arts and Sciences, and the State University of New York College of Environmental Science and Forestry. For decades, the department has been a national leader in promoting science literacy by advancing the knowledge base for effective science teaching and learning at all levels of education. We are well known for our commitment to both components of a seamless tradition: inquiry-based, student-centered science teaching and cutting edge research in pursuit of effective educational practices. We subscribe to the guiding principles that underlie the Next Generation Science Standards:

- children are born investigators;
- a focus on core scientific ideas and practices;
- understanding develops over time;
- science requires both knowledge and practice;
- science education should connect students’ interest and experiences;
- all students should be provided with equitable opportunities to learn science and become engaged in science practices.

The program prepares students to become science educators in 21st century classrooms, who are proficient in five areas:
- Critical reflection and explanations of practice.
- Content knowledge.
- Inclusive and culturally relevant pedagogy.
- Assessment of student learning and development of scientific literacy.
- Professional conduct and collaboration.

The M.S. in Science/Physics Education, in combination with the science and liberal arts distribution credits described below, meets the academic requirements for New York State initial teacher certification in Physics 7-12. There are also application, tests, and other requirements.

Master's Degree Course Requirements
The program requires 36 credits, and may be completed in 15 months, beginning in May. However, students who enter with education study equivalent to one of the courses below may have their syllabi reviewed for waiver of courses. In no case will fewer than 30 graduate credits be required.

First Summer
(courses with * include field experience)
- EDU 606 - Understanding Learning and Teaching 4 credit(s) *
- RED 625 - Literacy Across the Curriculum 3-4 credit(s) required*
- SCE 718 - Curriculum Problems in Science 3 credit(s) or
- Science Education Course (3 credits)

Fall - Candidacy Semester
- SCE 613 - Methods and Curriculum in Teaching Science 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) (3 credits) *
- Safe and Healthy Learning Environments (0 credit), 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
Spring - Standard Student Teaching Semester

- EDU 508 - Student Teaching 2-15 credit(s) (6 credits) *
- SCE 616 - Assessment & Data-Driven Instruction 3 credit(s)

Second Summer

- SCE 614 - The Nature of Science in Science Education 3 credit(s)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- Science research experience (may be completed in an earlier term) 1 credit

Intensive Examination

A master's degree intensive examination is also required.

Liberal Arts Course requirements

The requirements of this program include several undergraduate science and liberal arts distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. We help prospective students identify appropriate courses.

Interested students should contact the program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Science Content

This program requires: A major in biology or chemistry or earth science; OR by the end of the MS program, a minimum of 30 semester hour credits in the science area in which certification is sought, with at least 18 credits beyond the introductory level, including at least two laboratory courses, with one laboratory beyond the introductory level. Courses from departments other than these science areas (e.g., engineering science) will be evaluated on an individual basis for appropriate science content to be used toward the 30 credits. A sufficient amount of science must be completed before beginning the program. Appropriate science content courses taken during the program may count toward the minimum requirement. Specific courses that must be included for those without a science major include:

- Students without a chemistry major seeking chemistry certification must have completed coursework with some attention to inorganic, organic, analytical, and physical chemistry - including engineering.
- Students without a geology or earth sciences major seeking earth science certification must have completed courses with some attention to earth history, paleontology, mineralogy, structural geology, hydrology, and glacial geology. Earth science courses may include courses in geology, meteorology, and astronomy including applied courses in subjects such as soils or limnology.
- Students without a physics major seeking physics certification must have completed courses with some attention to mechanics, electricity, thermodynamics, and modern physics such as relativity, kinetic theory, quantum theory, etc. Other courses might include such topics as optics, circuits, or particle physics.

Liberal Arts Distribution courses

(one each, with no grade less than a C)

- Writing (course or equivalent)
- Mathematics
- History
- Social Science (other than history or psychology)
- Artistic Expression (course or equivalent)
- Humanities other than history or artistic expression
- Language other than English including American Sign Language (Completion of a high school Foreign Language Level 3 or higher may be substituted.)

Social Studies Education: Preparation 7-12, MS

Contact:

Jeffery A. Mangram, 154 Huntington Hall, 315-443-9077, jamangra@syr.edu

Description

The M.S. degree in Social Studies Education: Preparation 7-12 offers:

- The opportunity for those holding a bachelor's degree with the appropriate social science and other liberal arts prerequisites (see below), but no prior coursework in teaching, to prepare for New York State initial adolescence certification as social studies teachers (grades 7-12) while earning a master's degree. (There are also testing, application and other requirements).
- A program that exposes students to cutting-edge ideas in education courses taught by faculty specialists.
- Preparation with special emphasis on actively engaging middle and high school students, working with struggling students, and serving diverse student populations.
- 4 field placements allowing each candidate to learn from a variety of urban and suburban school settings, teachers, and youth with diverse backgrounds and abilities.
- Opportunity for sharing professional development with a cohort of students in social studies education, and in other secondary programs, through several shared core courses.
- Participation in the Academy of Social Studies Educators. Syracuse University faculty and staff, and students meet a few times a year to share professional and program development ideas.
- A program that seeks to prepare students to become social studies educators who are committed to developing civic-minded individuals, and who are proficient in five areas important to 21st century classrooms:
  - Critical reflection and explanations of practice.
  - Content knowledge.
  - Inclusive and culturally relevant pedagogy.
  - Assessment of student learning and development of social studies literacy.
  - Professional conduct and collaboration.

Master's Degree Course Requirements

The program requires 35 credits, is designed with full-time students in mind, and may be completed in 12 months, beginning in May. However, students who enter with education study equivalent to one of the courses below may have their syllabi reviewed for waiver of course(s). In no case will fewer than 30 graduate credits be required.

First Summer

- EDU 606 - Understanding Learning and Teaching 4 credit(s) *
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- RED 625 - Literacy Across the Curriculum 3-4 credit(s) 4 credit(s) required *

Fall - Candidacy Semester

- EDU 522 - Social Studies and Democracy: The Reconstruction of Education 3 credit(s)
- SED 613 - Methods and Curriculum in Teaching 3 credit(s)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) 3 credit(s) required *
- SED 640 - Participation in the Professional Development School 0-1 credit(s) (Social Studies Academy)
- Safe and Healthy Learning Environments (0 credit), which includes the following topics: Identifying/reporting child abuse, violence
School of Education

• 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.

Spring - Standard Student
Teaching Semester
- EDU 508 - Student Teaching 2-15 credit(s) / Social Studies 6 credits required *
- EDU 622 - International Education for Transformation 3 credit(s)
- SED 640 - Participation in the Professional Development School 0-1 credit(s) (Social Studies Academy) required
- SED 616 - Assessment & Data-Driven Instruction 3 credit(s) 3 credits

Intensive Examination
A master's degree intensive examination is also required.

Liberal Arts Course Requirements
The requirements of this program include several undergraduate social science and distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. We help students identify appropriate courses.

Interested students should contact Marie Sarno, Program Specialist, as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Social Science Content
- A major in history or another social science area; OR by the end of the MS program, a minimum of 39 semester hour credits of social sciences, with at least 27 completed before beginning the master's program (including 9 upper division credits).
- The 39 credit hours must include:
  - 18 credits total of American and global history.
  - One social science geography course
  - One course in economics
  - One course in political science

Distribution courses (one each, with no grade less than a C)
- Writing
- Mathematics (appropriate level)
- Natural Sciences

- Artistic Expression
- Humanities other than history or artistic expression
- Language other than English including American Sign Language (completion of high school Level 3 or higher may be substituted.)

Student Affairs Counseling, MS
Contact:
Derek Seward, PH.D., Sims Hall, Suite 440 315-443-2266, dseward@syr.edu

Core Faculty
Dr. Nicole R. Hill, Department Chairperson
Dr. James Bellini, Professor
Dr. Jason Duffy, Visiting Assistant Professor
Dr. Melissa Luke, Professor
Dr. Derek Seward, Associate Professor
Dr. Linwood G. Vereen, Associate Professor

Program Description
The Master of Science in Student Affairs Counseling prepares counselors for post-secondary educational settings who will have the knowledge and skills to promote and enhance the healthy development of all students in those settings. With the current context of higher education and some of the challenges present, it is a critical time for counselors to be engaged in the services and supports offered to undergraduate and graduate students. Our program emphasizes critical counseling skills that provide a foundation for professionals to meet the needs of both students in crisis and those who are engaged in developmental transitions during the collegiate experience.

- Student Services and Advisement
- Residence Life
- Campus Substance Abuse Programs
- Athletic Departments
- Rape Crisis Centers
- University Career Centers
- Multicultural and International Students' Offices
- Judicial Affairs' Office

As part of the program, students acquire skills in individual and group counseling, career counseling, and multicultural counseling. Additionally, students complete 12 credits of content knowledge about various aspects of higher education. Upon completion of the program, students are immediately eligible to become National Certified Counselors with the National Board for Certified Counselors (NBCC).

Programs include extensive fieldwork opportunities in which students gain hands-on experience working with college students and clients in a wide range of counseling and educational settings. Students work closely with their advisor, and the fieldwork coordinator to identify settings that meet their individual interests and career goals. The faculty is nationally recognized for their leadership in the profession and all classes are taught by skilled experts and experienced clinicians.

The faculty is deeply committed to the growth and development of their students; faculty work closely with both our master's and doctoral students.

Students are trained in the most current practices and research in counseling and provided the opportunity to develop their skills and succeed in their chosen area of specialization. The department's goal is to prepare national leaders in counseling. We provide constructivist and experiential learning environments in our classes and are committed to reflexive leadership. We seek to develop a diverse group of professionals who will excel in knowledge, skills, commitment, and service in a wide range of educational and community settings.

S.U. Re-Accredited through 2017:
After an extensive review of the Counseling and Human Services Programs, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) recently announced that Syracuse University’s programs have met all expectations, and granted us the full eight year accreditation period for all of our accredited master's degree programs (Clinical Mental Health Counseling, School Counseling, and Student Affairs Counseling), as well as our Counselor Education Ph.D. program. This means each of these programs will be accredited by CACREP until 2017. This decision is a testament to the quality education offered here at Syracuse University, and a signal of support for the work that is done here. CACREP accreditation is critical as you compare programs in that counselors must be graduates of a CACREP program as of 2022 to be credentialed as a National Certified Counselor. Accreditation also streamlines licensure and credentialing processes for professional counselors.

Admission
In our admission process, we consider multiple facets of an applicant's portfolio and background because we believe that successful counselors need to be interpersonally skilled, highly self-aware, professionally mature, academically prepared for graduate work, and committed to the values and philosophies of the counseling profession and the Department of Counseling and Human Services at Syracuse University. Therefore, academic, interpersonal, professional, leadership, and personal components are integrated in our admission decision process.

The Department of Counseling and Human Services faculty seeks to admit individuals who are personally and academically prepared to be successful in completing the master's degree program in Counseling. Within these parameters,
the faculty is committed to admitting students who represent diverse backgrounds or who have special abilities to serve a diverse population. Admission is highly competitive and conducted three times a year.

Major Requirements

The M.S. in Student Affairs Counseling is a 48 credit hour program.

Required courses include the following:

- COU 612 - Professional Orientation & Ethical Practice 3 credit(s)
- COU 614 - Group Work in Counseling 3 credit(s)
- COU 624 - Theories of Counseling 3 credit(s)
- COU 626 - Social and Cultural Dimensions of Counseling 3 credit(s)
- COU 628 - Life-Span Human Development 3 credit(s)
- COU 642 - Career Development 3 credit(s)
- COU 644 - Counseling Prepracticum 3 credit(s)
- COU 646 - Assessment in Counseling 3 credit(s)
- COU 651 - Crisis Counseling 3 credit(s) / COU 675
- COU 700 - Selected Topics in Counseling 1-6 credit(s) College Counseling and Student Affairs Counseling
- COU 750 - Practicum in Counseling 3 credit(s)
- COU 758 - Research Methods 3 credit(s)
- COU 790 - Internship in Counseling 3-6 credit(s)
- HED 664 - Administrative Principles and Practices for Higher Education 3 credit(s)
- HED 712 - Research on the College Student 3 credit(s)

Students can complete the Student Affairs Counseling program on a part-time basis. Consultation with the advisor about which courses to take which semester is especially needed for part-time study.

Transfer Credit

The Graduate School at Syracuse University allows students to transfer in up to 30% of the credits required for a master's degree from other academic institutions. Only courses taken within the last seven years in which grades of "B" or better were earned can be transferred. Once matriculated, decisions about transfer of specific courses, as well as decisions about whether any course may be used to waive a required course, are made by the student's advisor in consultation with appropriate faculty. Some courses (for example, Practicum) taken elsewhere may not be used to substitute for the same course at SU.

Teaching and Curriculum,

MS

Contact:
for M.S. program; Benjamin Dotger, 150 Huntington Hall, 315-443-9659, bdotger@syr.edu

Major Requirements

The M.S. program is available to those seeking advanced study in education, but not a teacher certification program. It is a 30 credit flexible degree program, which encompasses a number of fields of practice in education. Each program of study is developed individually with an advisor in a specific content area of teaching and/or areas of special interest. Consider these examples:

- A social studies teacher, one could elect courses on contemporary pedagogies, learn how to nurture literacy skills within a curriculum, learn how to address citizenship and counter the effects of the media on student biases, or study with world-class political scientists at Syracuse University's Maxwell School of Citizenship.
- An art educator could expand an understanding of curriculum by teaching in specialized workshops for children, could engage in an art medium with which they are less familiar through the School of Art and Design, or could studying cross-cultural arts and interdisciplinary curricula.
- An elementary education teacher could learn how to promote reading progress among students for whom this is a challenge, how to teach children for whom learning English is difficult, or how to adapt instruction to the unique needs of children with different learning styles.

These personalized plans of study will also incorporate the following elements:

- At least one course in basic research methods, in analysis of research or in tests and assessments
- At least four graduate level courses in the student's field of teaching certification
- At least one course from outside the area of teaching certification

At the end of the program, students must successfully complete two requirements: compilation and presentation of an acceptable Professional Portfolio, and a Master's Intensive Exam.

Special permission is required for application to this program.

Teaching English Language Learners (First Certification), MS

Contact:
Zaline Roy-Campbell, 200 Huntington Hall, 315-443-8194, zmrycopam@syr.edu

Description

The Teaching English Language Learners (TELL)/First Certificate program prepares teachers to help students develop proficiency in English for academic and social purposes in integrated and free-standing services, compatible to current school programs, and to become effective advocates for integrated, fully inclusive classroom-based programs that draw on student strengths and address student needs. The program is grounded on the principles that the linguistic and cultural backgrounds of English language learners are valuable resources and that students best acquire and develop English language literacy - speaking, listening, reading and writing-in rich language contexts.

Through academic work, TELL degree candidates gain knowledge of theories, strategies, and methodologies in teaching English language learners and become conversant in socio-cultural and socio-linguistic issues that impact acquisition of English as an additional language. The combination of coursework and practical experience prepares teachers as specialists in educating English language learners by providing them a thorough understanding of how theory is connected to effective practice in promoting second language acquisition and developing literacy for social and academic purposes.

This program is designed for those without certification in another teaching area or an education background, and is a 40-credit course of study typically pursued full-time over 15 months, beginning in May (a summer-fall-spring-summer sequence). It meets the academic requirements for the New York teaching certificate to teach English to Speakers of Other Languages (for all grades, PreK-12).

The program also requires a minimum of 12 credits in one language other than English as an entry requirement.

Master's Level Course Requirements

- EDU 606 - Understanding Learning and Teaching 4 credit(s) (35 hours including some hours of observation and analysis of video episodes of teaching)
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- RED 607 - Issues in Multicultural Literacy 3 credit(s)
- ELL 625 - Methods of Teaching Literacy to English Language Learners 3 credit(s) (25 hours of fieldwork, PreK-6)
- RED 626 - Early Intervention for Children's Reading Problems 3 credit(s)
- Safe and Healthy Learning Environments 0 credit(s), 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. To be completed before student teaching.

- ELL 615 - Linguistics for Teachers of English Language Learners 3 credit(s)
- ELL 635 - Methods of Literacy Across the Curriculum for English Language Learners 3 credit(s) (25 hours of fieldwork, 7-12)
- SPE 612 - Adapting Instruction for Diverse Student Needs 3 credit(s) 15 hours of fieldwork
- LIN 591 - Second Language Acquisition 3 credit(s)
- EDU 508 - Student Teaching 2-15 credit(s) 3 credit(s) required (one semester of half-day work in schools; includes SPE 612 and ELL 635 fieldwork time)
- ELL 655 - Teaching English Language Learners Practicum and Capstone Seminar 6 credit(s) (minimum of 20 days student teaching in an ESL classroom)

Students will complete a professional portfolio requiring the integration of research and practice at two different points in the program—one following the completion of three key courses (ELL 615, Linguistics for Teachers of English Language Learners; ELL 625, Methods of Teaching Literacy to English Language Learners; RED 607, Issues in Multicultural Literacies) and the other following the completion of ELL 655, Teaching English Language Learners Practicum and Capstone Seminar.

Required Seminars

To be eligible for these New York State teacher certifications, students in the Teaching English Language Learners programs must complete or have completed training in:
- Child Abuse Prevention
- Child Abduction Prevention
- Violence Prevention
- Fire and Arson Prevention
- Prevention of Alcohol, Tobacco, and Drug Abuse
- Highway Safety
- Dignity for All Students Act

Students must complete this requirement prior to their first student teaching experience.

Liberal Arts Course Requirements

The requirements of this program include several undergraduate social science and distribution courses. It is not unusual that an applicant will have one or more of these courses left to take. These do not need to be completed before applying and may be taken at an institution other than Syracuse University. However, some of the courses need to be done before starting the graduate program, and all must be finished before a degree can be granted. The program helps students identify appropriate courses.

Liberal Arts Concentration or Major

A liberal arts concentration or major of at least 30 semester hours, with 15 upper division credits, or equivalent, is required. The program does admit students with college majors in non-liberal arts areas. The transcript review process includes determining the best concentration area choice and how many additional courses students may need to take. If appropriate, concentration courses may also be used to meet the distribution course requirements listed below.

Interested students should contact the program coordinator as early as possible (including before applying) to have unofficial transcripts reviewed against the liberal arts requirements. This allows more time to enroll in needed courses.

Liberal Arts Distribution course requirements:

Language Other than English 12 credits or equivalent of a language other than English must be completed no later than the semester before EDU 508. Equivalency would include such things as passing the Level II CLEP examination in a foreign language; or completing one or more college courses at a level beyond introductory, such that the college credits earned plus the credits represented by the lower level courses that were waived would equal 12 or more semester hours.

One course in each of the following:
- Writing
- Mathematics
- Natural Science
- Artistic Expression
- History
- Social Science other than History

Humanities (If not otherwise met, may be met by the linguistics (LIN) requirements in the program.)

Degree Awarded: M.S. in Teaching English Language Learners (First Certification)

Teaching English Language, MS

Contact

Zaline Roy-Campbell, 200 Huntington Hall, 315-443-8194, zmroycam@syr.edu

The Teaching English Language Learners (TELL) program prepares teachers to help students develop proficiency in English for academic and social purposes in integrated and free-standing services, compatible to current school programs, and to become effective advocates for integrated, fully inclusive classroom-based programs that draw on student strengths and address student needs. The program is grounded on the principles that the linguistic and cultural backgrounds of English language learners are valuable resources and that students best acquire and develop English language literacy - speaking, listening, reading and writing-in rich language contexts.

Through academic work, TELL degree candidates gain knowledge of theories, strategies, and methodologies in teaching English language learners and become conversant in socio-cultural and socio-linguistic issues that impact acquisition of English as an additional language. The combination of coursework and practical experience prepares teachers as specialists in educating English language learners by providing them a thorough understanding of how theory is connected to effective practice in promoting second language acquisition and developing literacy for social and academic purposes.

This program is designed for those who have met all requirements for NYS certification in another teaching area by the time of entry, and is a 30-credit course of study. It can be pursued full-time over a year, in a fall-spring-summer sequence, or part-time over a several-year period. The program meets the academic requirements for the New York teaching certificate to teach English to Speakers of Other Languages (for all grades, PreK-12).

The program also requires a minimum of 12 credits in one language other than English, or equivalent. This requirement must be met before taking ELL 655. Equivalency would include such things as passing the Level II CLEP examination in a foreign language; or completing one or more college courses at a level beyond introductory, such that the college credits earned plus the credits represented by the lower level courses that were waived would equal 12 or more semester hours.

Required Courses

- LIN 601 - Introductory Linguistic Analysis 3 credit(s)
- LIN 591 - Second Language Acquisition 3 credit(s)
- ELL 615 - Linguistics for Teachers of English Language Learners 3 credit(s)
- RED 607 - Issues in Multicultural Literacy 3 credit(s)
- RED 626 - Early Intervention for Children’s Reading Problems 3 credit(s)
- ELL 625 - Methods of Teaching Literacy to English Language Learners 3 credit(s) 25 hours of fieldwork required, PreK-6
- ELL 635 - Methods of Literacy Across the Curriculum for English Language Learners 3 credit(s) 25 credits of fieldwork required, 7-12
- ELL 645 - Issues in Educating English Language Learners 3 credit(s)
- ELL 655 - Teaching English Language Learners Practicum and Capstone Seminar 6 credit(s) (minimum of 20 days student teaching in an ESL...
Required Seminars
To be eligible for these New York State teacher certifications, students in the Teaching English Language Learners programs must complete or have completed training in:

- Child Abuse Prevention
- Child Abduction Prevention
- Violence Prevention
- Fire and Arson Prevention
- Prevention of Alcohol, Tobacco, and Drug Abuse
- Highway Safety
- Dignity for All Students Act

Students must complete this requirement prior to their first student teaching experience.

Counseling and Counselor Education, PhD

Contact:
Nicole Hill, Ph.D., Chair, Sims Hall, Suite 440, 315-443-2266, nhill@syr.edu

Core Faculty
Dr. Nicole R. Hill, Department Chairperson
Dr. James Bellini, Professor
Dr. Jason Duffy, Visiting Assistant Professor
Dr. Melissa Luke, Professor
Dr. Derek Seward, Associate Professor
Dr. Linwood G. Vereen, Associate Professor

The Doctor of Philosophy in Counseling and Counselor Education and Supervision is a CACREP-accredited program designed to prepare graduates for academic positions and other careers in Counselor Education, building on the entry level competencies of the master's degree in counseling. The doctoral program of study incorporates didactic and experiential learning and includes a cognate area of study involving at least nine semester credits, which are usually completed outside of the department.

The overall goal for the doctorate in Counseling and Counselor Education is to produce professors, administrators, and clinicians who will become leaders at the regional and national level in their area(s) of expertise. That leadership will include contributing to the professional body of knowledge through research and disciplined practice, planning and organizing systemic services to the larger community, and establishing preparation programs for counselors to serve the future needs of society.

Graduates of the Syracuse Ph.D. Counseling and Counselor Education program will:

- Demonstrate a high level of competence as practicing professional counselors in a variety of counseling settings;
- Manifest advanced expertise in diversity, sociocultural, and social justice matters, how culture impacts the process of counseling, and how social systems impact culture;
- Demonstrate knowledge and skill in the area of clinical supervision, including how supervision shapes skills, reinforces preferred practices, and supports the caregiver;
- Possess the requisite skills to contribute to the body of knowledge in professional counseling through scholarly research and writing, including research conceptualization, designing research, analysis of data, and dissemination of findings;
- Demonstrate advanced skill in assessment within at least one specific context;
- Demonstrate advanced competence in theory construction, including philosophical premises that relate to particular theories (counseling, career development, human development);
- Demonstrate competence in the use of technology for teaching, supervision, research, and practice;
- Demonstrate advanced understanding of the counseling profession, including its history, philosophy, and unique contributions to society;
- Develop a specialty within or related to the counseling profession;
- Demonstrate pedagogical competence in delivering counselor education curricula;
- Display the highest level of professional ethics and personal integrity; and
- Address and contribute to issues of professional leadership and advocacy through active involvement in state, regional, and national professional associations.

The strengths of our doctoral program are numerous. Current and past doctoral students have offered the following comments on the quality of S.U.'s program:

- Faculty who are nationally recognized yet student-focused
- Multiple opportunities for clinical supervision
- Opportunities and support for developing teaching skills through the Future Professoriate program
- Solid financial support through graduate assistantships and excellent medical benefits
- Flexible policies allowing doctoral students to use GA support for summer courses
- Financial support to attend and present at national conferences
- Opportunities to develop research skills as part of on-going research teams

The Department of Counseling and Human Services has been a pioneer in training highly skilled practitioners and leaders in a wide range of counseling settings. Syracuse's programs are nationally accredited and can lead to national certification or State Certification in School Counseling or Licensure as a Clinical Mental Health Counselor.

The faculty is deeply committed to the growth and development of their students; faculty work closely with both our master's and doctoral students. Students are trained in the most current practices and research in counseling and provided the opportunity to develop their skills and succeed in their chosen area of specialization. Doctoral students have many opportunities to develop their teaching, research and supervision skills and are prepared to be nationally competitive in academic and practice settings.

S.U. Re-Accredited through 2017:

After an extensive review of the Counseling and Human Services Programs, the Council
for Accreditation of Counseling and Related Educational Programs (CACREP) recently announced that Syracuse University’s programs have met all expectations, and granted us the full eight year accreditation period for all of our accredited master’s degree programs (Clinical Mental Health Counseling, School Counseling, and Student Affairs Counseling), as well as our Counselor Education Ph.D. program. This means each of these programs will be accredited by CACREP until 2017. This decision is a testament to the quality education offered here at Syracuse University, and a signal of support for the work that is done here. CACREP accreditation is critical as you compare programs in that counselors must be graduates of a CACREP program as of 2022 to be credentialed as a National Certified Counselor. Accreditation also streamlines licensure and credentialing processes for professional counselors.

Admission
In our admission process, we consider multiple facets of an applicant’s portfolio and background because we believe that successful counselor educators, supervisors, and leaders need to be interpersonally skilled, highly self-aware, professionally mature, academically prepared for graduate work, and committed to the values and philosophies of the counseling profession and the Department of Counseling and Human Services at Syracuse University. Therefore, academic, interpersonal, professional, leadership, and personal components are integrated in our admission decision process.

The Department of Counseling and Human Services faculty seeks to admit individuals who are personally and academically prepared to be successful in completing the doctoral program in Counseling and Counselor Education. Within these parameters, the faculty is committed to admitting students who represent diverse backgrounds or who have special abilities to serve a diverse population. Admission is highly competitive and conducted once a year.

Applicants for admission to the Ph.D. program in Counseling and Counselor Education will be evaluated on the following criteria:

- Prior graduate work in counseling or related field. Applicants should have completed the equivalent of a master’s degree in counseling or rehabilitation counseling and should have a minimum graduate grade point average of 3.25;
- The Graduate Record Examination;
- Completion of a minimum of one year of work experience in counseling settings prior to admission to the doctoral program is desirable;
- Professional references from former professors and professional colleagues;
- Potential for and evidence of leadership and advocacy;
- History of and potential for tenacity, engagement, and collaboration;
- Congruence of professional goals with doctoral program features; and,

- A writing sample (which may be a paper written for a master’s level course).

The Process of Admission
The deadline for doctoral applications is December 1 for matriculation the following fall semester. This deadline is required for persons seeking funding, including fellowships or graduate assistantships. Prospective students who wish to study part-time should contact Dr. Nicole R. Hill, doctoral program co-coordinator. All application materials, including the Department application, can be obtained through the Department website. Doctoral applications are reviewed by the entire full-time faculty. A positive review of the application will be followed by an interview.

Major Requirements
The doctoral program consists of approximately 96 graduate credits beyond the baccalaureate degree, with an additional 9-12 dissertation credits. Students must complete a minimum of 48 credits of course work (excluding dissertation) at Syracuse University.

Required doctoral courses in counseling:
- COU 800 - Selected Topics 1-6 credit(s)
- COU 800-Experiential & Constructivist Pedagogy in Counselor Education(3 credits)
- COU 800-Reflexive Leadership in Counselor Education(3 credits)
- COU 876 - Ecological Issues in Counselor Education & Supervision 3 credit(s)
- COU 874 - Theory and Practice of Clinical Supervision 3 credit(s)
- COU 872 - Advanced Theory and Practice in Group Work 3 credit(s)
- COU 878 - Seminar in Counseling Theory 3 credit(s)
- COU 882 - Seminar in Professional Issues 3 credit(s)
- COU 860 - Advanced Practicum in Counseling 3 credit(s)
- COU 950 - Doctoral Internship 0-6 credit(s)
- COU 910 - Doctoral Research Seminar 0-3 credit(s)

The Research Sequence:
The doctoral research experience is an intentional plan to develop research expertise and experience for each student. It is part of the process of establishing a scientist-practitioner perspective that undergirds the entire doctoral experience, leading to data-based counseling practice, contributions to the body of knowledge in the helping services, and program evaluation skills. All doctoral students complete a minimum of 12 credit hours of research course work (beyond the master’s curriculum) during which the student will be expected to acquire receptive literacy in both quantitative and qualitative statistics and research design and a depth of knowledge in one or the other. The Department offers additional assistance in research through the COU 910 Doctoral Research Seminar.

Students must complete a research/statistics sequence of courses with either a Qualitative Research or a Quantitative Research emphasis. In either selection, students must take one course in the alternative research approach. Students are encouraged to take research courses beyond those that are required and research may be chosen as a cognate area.

Possible Qualitative Research Methods sequence:
- EDU 603 - Introduction to Qualitative Research 3 credit(s)
- EDU 647 - Statistical Thinking and Applications 3 credit(s)
- EDU 810 - Advanced Seminar in Qualitative Research I 3 credit(s)
- EDU 815 - Advanced Seminar in Qualitative Research II 3 credit(s)

Possible Quantitative Research Methods sequence:
- EDU 603 - Introduction to Qualitative Research 3 credit(s)
- EDU 647 - Statistical Thinking and Applications 3 credit(s)
- EDU 791 - Advanced Seminar in Quantitative Research Methods I 3 credit(s)
- EDU 886 - Multivariate Research Methods 3 credit(s) / COU886-Multivariate Research Methods

Required Cognate (minor): 9 - 12 credits
Each student must establish an area of focus in addition to the required doctoral curriculum. Courses for this focus will be determined by the student in consultation with the doctoral advisor. With few exceptions, cognate areas are completed outside the Department (e.g., clinical psychology, distance learning, marriage and family therapy, higher education). Cognates may also be comprised of courses from different departments but following a particular theme (e.g., research methodology/statistics).

Transfer Credit
No more than one-half of credit hours in your doctoral program, not including doctoral dissertation credits, may be transferred into Syracuse University from other institutions of higher education.
At least half of all coursework must be taken at Syracuse University and up to 30 credits can be transferred in from a graduate program at another institution with advisor’s approval.

Each program of study must include EDU 781: Institutions and Processes of Education and CFE 700: Epistemology and the Politics of Knowledge.

The PhD program in Cultural Foundations of Education is research-oriented. Students are required to take at least 12 credit hours of coursework on research methodology so they will have a depth of competence in one research methodology and be sufficiently familiar with other methods used with some frequencies in their area of expertise. Students work with their advisor to select research methodology courses that are most appropriate for students’ professional goals.

Educational Leadership, EdD

Contact:
Joseph Shedd, 150 Huntington Hall, 315-443-2685, jbs hed @ syr.edu

Major Requirements
The Ed.D. program in educational leadership is designed for educators who want to engage in serious scholarship of issues of leadership and learning in pre-collegiate educational settings. The program’s emphasis on applied research makes it particularly appropriate for those who expect to continue as educators in field settings, although it is not designed exclusively for such students.

Higher Education, PhD

Contact:
Cathy Engstrom, Chair, 350 Huntington Hall, 315-443-4763, cmengstr@syr.edu

Higher Education focuses on issues of diversity and inclusion, as applied to both the theory and practice of student success, development and learning in higher education. Given the increasing diversity of college student backgrounds, critical reforms are needed in higher education in order to develop diverse curricular and non-curricular structures, practices, policies, and pedagogies that embrace and build upon students’ talents, experiences, and potential so they learn, develop, and succeed. Due to the complexity of the issues facing higher education around the world, students draw on resources in the School of Education and across the University to provide an interdisciplinary, foundational perspective supplemented by ongoing, integrated practical experiences. Students analyze higher education at a variety of levels, including individual students, student populations, institutions, and systems of higher education, and the policies and practices related to each that foster the success of all college students.

Major Requirements

Course offerings cover student development and learning, student attainment and retention; race and gender in higher education; student affairs administration; administrative theory and practice in higher education; learning communities; legal issues in higher education and history.

A hallmark of these programs and their coursework is community and collaboration. Many courses require collaborative group work that involves students as active learners in class and in our program learning community. At the same time, the program is structured to promote collaboration among students, faculty, and administrators. Whenever possible, students and faculty will work together on collaborative research and administrative projects.

The Doctoral degree program include coursework throughout the University so students can draw upon the expertise of faculty from departments in the School of Education (e.g., Cultural Foundations of Education) and a variety of schools including the Maxwell School of Citizenship and Public Affairs and the School of Management. Both degree programs also offer field and internship experiences (required for all master's degree students) which are available at the University and a diversity of neighboring institutions. Doctoral students specializing in higher education are required to have a minimum of three years of full-time experience in higher education. Because the department and its faculty have a strong reputation within the field, graduates of the program are typically embraced by a vibrant market offering a variety of positions.

Note:
No more than 6 credits may be taken prior to matriculating into the higher education M.S. degree program. No more than 9 credits post master's degree may be taken before matriculating into the Ph.D. program. All master's students must take a minimum of 9 credits per academic year. All doctoral students must complete 12 credits per academic year.

Instructional Design, Development and Evaluation, PhD

Contact:
Tiffany A. Koszalka, Chair, 259 Huntington Hall, 315-443-3703, takoszal@syr.edu

The Instructional Design, Development and Evaluation Department (IDD&E) offers a variety of programs to help students develop the competencies required to identify and evaluate learning and performance problems and to design, develop, and implement appropriate instructional solutions to these problems. Students develop competencies to conduct instructional analysis, make appropriate design decisions, develop instructional materials, implement and evaluate instructional programs, and assess learning. The curriculum includes courses that blend soft technologies (thinking models and...
School of Education

Theories, strategic planning, IDD&E processes, interpersonal communications, and software) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate non-technology and technology-supported instructional solutions for a variety of educational and professional settings. Certificates are offered in educational technology (15 credits), professional practice in educational technology (24 credits), and instructional design fundamentals (12 credits); a master's of science degree is offered in Instructional Technology for NYS K-12 permanent certification; and M.S., C.A.S., and Ph.D. degrees in Instructional Design, Development and Evaluation, are offered.

Major Requirements

Doctor of Philosophy students may select one of two emphases in their Ph.D. programs: an Academic Research focus, or a Professional Studies focus. Although both encompass research-oriented emphases, the two options reflect the increasingly diverse skills and settings required for Ph.D. preparation. While both emphases require 90 graduate credits and a dissertation, there are differences in the kinds of dissertations expected and the appropriate inquiry requirements for each emphasis. The Academic Research focus prepares students for tenure-line faculty positions in research universities. Special emphasis is given to in-depth methodological training, extensive research experience, advanced expertise in a focused area of inquiry, participation in academic and professional research communities, and the development of teaching skills. The Professional Studies focus prepares graduates for these settings by emphasizing strong methodological training, extensive experience with applied projects, the flexibility to work in teams on a broad range of problems, participation in applied professional communities, and the development of management and leadership skills.

Literacy Education, PhD

Contact:
Dr. Kelly Chandler-Olcott, 200 Huntington Hall, 315-443-1472, kphandl@syr.edu

Program Requirements

The Doctor of Philosophy (Ph.D.) in Literacy Education provides students with the opportunity to gain expertise in cognitive, social, and critical perspectives toward language and literacy development, instruction, and teacher education. Students learn to conduct and publish significant scholarly work, design innovative curricula and assessment, advocate for literacy policy, and teach pre- and in-service teachers. They draw on Reading and Language Arts Department faculty expertise and courses, as well as offerings from across the School of Education and University, to develop a 90-credit program of study that focuses on childhood literacy, adolescent literacy, or teaching English as an additional language. Formal application includes a completed SOE application, three references, college/university transcripts, and competitive GRE scores. Students who are non-native speakers of English are also required to submit TOEFL (or IELTS) scores. Successful applicants typically have at least 3 years K-12 teaching experience, a Master's degree in education or related area, preferably in literacy, reading education, or English education for native or non-native speakers, competitive GREs and TOEFL (or IELTS) scores, a well written personal statement indicating focus, drive, and knowledge of literacy-related Ph.D. career paths, and references who speak to the candidate's potential to contribute to the literacy field.

Mathematics Education, PhD

Chair


Faculty


The Department of Mathematics has 31 faculty members, with research interests in several areas of mathematics, statistics, and mathematics education, and approximately 55 graduate students. The department is housed in the recently renovated Carnegie Library building on the main campus quadrangle. Programs of study include those for M.S. and Ph.D. degrees in Mathematics, with or without a concentration in Statistics, and for M.S. and Ph.D. degrees in Mathematics Education.

Ph.D. in Mathematics Education

This degree program is by the School of Education in cooperation with the Department of Mathematics. The program includes not less than 90 credits of graduate work beyond the bachelor's degree, of which 9 to 24 are allocated for the dissertation. Students must meet the general requirements for the Ph.D. in education. A minimum of 48 credits is required in the major area.

Formal acceptance into this program depends in part on the preliminary examination in the major area, taken no later than the semester in which 45 credits of graduate work have been completed. A research apprenticeship must also be completed. Qualifying examinations, usually written and covering both the major and minor areas, are taken after the completion of approximately 70 credits of coursework.

Algebra

Algebraic geometry (moduli spaces of curves, equations defining finite sets of points), commutative algebra (homological algebra, Cohen-Macaulay modules, characteristic p), non-commutative algebra (representations of finite-dimensional algebras, homological algebra, group actions on non-commutative rings, Hopf algebras, enveloping algebras, non-commutative algebraic geometry). Faculty: Diaz, Kleiner, Leuschke, Miller, Zacharia.

Analysis

Complex analysis (several complex variables, pluripotential theory, complex dynamics, invariant metrics, holomorphic currents, Kähler geometry, rigidity problems), geometric analysis (PDE on manifolds, geometric flows), harmonic analysis, partial differential equations (linear and nonlinear elliptic PDE, boundary value problems on nonsmooth domains), geometric function theory (quasiconformal mappings, analysis on metric spaces). Faculty: Coman, Iwaniec, Kovalev, Lanzani, Onninen, Poletsky, Verchota, Vogel, Wylie, Yuan.

Applied Mathematics


Combinatorics

Combinatorics, graph theory, rigidity theory, symmetries of planar graphs, automorphism groups of graphs. Faculty: Graver.

Geometry/Topology

Low-dimensional topology and knot theory (knot concordance, Heegaard Floer homology, homology theories for knots and links), K-theory (topological...
The following research groups are currently represented in the department.

Research Areas

Algebra

Algebraic geometry (moduli spaces of curves, equations defining finite sets of points), commutative algebra (homological algebra, Cohen-Macaulay modules, characteristic $p$), non-commutative algebra (representations of finite-dimensional algebras, homological algebra, group actions on non-commutative rings, Hopf algebras, enveloping algebras, non-commutative algebraic geometry); Faculty: Diaz, Kleiner, Leuschke, Miller, Quinn, Zacharia.

Analysis

Complex analysis (several complex variables, pluripotential theory, complex dynamics, invariant metrics, holomorphic currents, Kähler geometry, rigidity problems), geometric analysis (PDE on manifolds, geometric flows), harmonic analysis, partial differential equations (linear and nonlinear elliptic PDE, boundary value problems on nonsmooth domains), geometric function theory (quasiconformal mappings, analysis on metric spaces), Faculty: Coman, Iwaniec, Kovalev, Lanzani, Onninen, Poletsky, Verchota, Vogel, Wylie, Yuan.

Applied Mathematics


Combinatorics

Combinatorics, graph theory, rigidity theory, symmetries of planar graphs, automorphism groups of graphs. Faculty: Graver.

Geometry/Topology

Low-dimensional topology and knot theory (knot concordance, Heegaard Floer homology, homology theories for knots and links), K-theory (topological K-theory of Eilenberg-Mac Lane spaces, equivariant homotopy theory), Riemannian/Kähler geometry (Ricci curvature and topology, special metrics, geometric flows, rigidity problems). Faculty: Ucci, Wehrli, Wylie, Yuan.

School of Education

Graduate Awards

Figures for graduate appointments represent 2016-2017 stipends.

Graduate Scholarships:

Support graduate study for students with superior qualifications; provide, in most cases, full tuition for the academic year.

Graduate Assistantships:

Offered to most Graduate Scholarship recipients; no more than an average of 15 hours of work per week; nine months; stipend ranging from $17,589 to $21,494 in addition to tuition scholarship for 24 credits per year. Additional summer support is generally available.

Syracuse University Graduate Fellowships:

Tax-free stipends are $24,795 for nine months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 credits during the academic year.

Facilities

The mathematics collection is held within the Carnegie Library and currently includes over 34,000 books. Many of the resources are online and include MathSciNet, Current Index to Statistics, Jahrbuch Database, MathEduc, ERIC, Scopus, and Web of Science, and over 350 mathematics journal subscriptions.

In addition to covering a broad range of pure and applied mathematics, the collection contains print and electronic resources in the history of mathematics, mathematics education, and statistics. The following resources are available for student borrowing from the Carnegie Library service desk: TI graphing calculators, geometry kits, and course reserve books.

The computer lab in Carnegie Library, Room 208, has 16 computers, and a color printer with copying and scanning capability. The lab computers provide extensive software for statistical or data analysis, data base management, programming, and graphics. More information on computing services and the software available for students may be found on the ITS website: https://its.syr.edu/computer-labs/index.html.

The Carnegie Library contains over 210,000 volumes in the sciences, including biology, chemistry, engineering and computer science, library and information science, nutrition science and dietetics, public health, physics & astronomy, photography, technical arts, pure and applied mathematics, probability and statistics, mathematics education, and military and naval sciences. The historic Reading Room provides a quiet place for students to study and use library resources.

Mathematics Education, PhD

Contact

Joanna Masingila, 203 Carnegie, 315-443-1483, jomasing@sy.edu

The School of Education, in cooperation with the Department of Mathematics, in the College of Arts and Sciences, offers a Ph.D. degree in Mathematics Education. The program is designed for students who have demonstrated a high level of mathematical capability and are committed to full-time graduate study. It emphasizes preparation for academic positions in three areas:

- Research on the teaching and learning of mathematics.
- Teacher preparation and professional development.
- Teaching mathematics education at the college level.

Ph.D. in Mathematics Education

Successful completion of the doctoral program typically requires three to four years of study beyond the master’s degree. Each student’s program of study is tailored to fit the individual’s background, professional experience, and career goals and to satisfy degree requirements.

Most doctoral students earn the majority of their mathematics education credits by working closely with the mathematics education faculty in courses, independent study projects, and internships. Students are encouraged to develop strong backgrounds in mathematics, research design and methods, and learning theories.
Probability
Interacting particle systems, Brownian motion, random walks, probabilistic methods in mathematical finance, martingales. Faculty: Cox, Griffin, McConnell.

Statistics
Ranking and selection theory (applications in radar signal processing and two-stage procedures for multinomial problems), change-point problems, sequential analysis, longitudinal analysis, neural networks. Faculty: Chen, Kim, Wolterman.

Graduate Awards
Figures for graduate appointments represent 2016-2017 stipends.

Graduate Scholarships:
Support graduate study for students with superior qualifications; provide, in most cases, full tuition for the academic year.

Graduate Assistantships:
Offered to most Graduate Scholarship recipients; no more than an average of 15 hours of work per week; nine months; stipend ranging from $17,589 to $21,494 in addition to tuition scholarship for 24 credits per year. Additional summer support is generally available.

Syracuse University Graduate Fellowships:
Tax-free stipends are $24,795 for nine months of full-time study; tuition scholarship for 15 credits per semester for a total of 30 credits during the academic year.

Facilities
The mathematics collection is held within the Carnegie Library and currently includes over 34,000 books. Many of the resources are online and include MathSciNet, Current Index to Statistics, Jahrbuch Database, MathEduc, ERIC, Scopus, and Web of Science, and over 350 mathematics journal subscriptions.

In addition to covering a broad range of pure and applied mathematics, the collection contains print and electronic resources in the history of mathematics, mathematics education, and statistics. The following resources are available for student borrowing from the Carnegie Library service desk: TI graphing calculators, geometry kits, and course reserve books.

The computer lab in Carnegie Library, Room 208, has 18 computers, and a color printer with copying and scanning capability. The lab computers provide extensive software for statistical or data analysis, data base management, programming, and graphics. More information on computing services and the software available for students may be found on the ITS website: https://its.syr.edu/computer-labs/index.html.

The Carnegie Library contains over 210,000 volumes in the sciences, including biology, chemistry, engineering and computer science, library and information science, nutrition science and dietetics, public health, physics & astronomy, photography, technical arts, pure and applied mathematics, probability and statistics, mathematics education, and military and naval sciences. The historic Reading Room provides a quiet place for students to study and use library resources.

Science Education, PhD
Contact
John W. Tillotson, 101 Heroy Geology Lab, 315-443-2586, jwtiltot@syr.edu

Students with an interest in research and/or university teaching usually pursue the Ph.D. degree. Their programs emphasize intensive study in a major area of specialization and often a minor area as well, leading to the development or extension of theory and research in the major field.

Graduates of the Ph.D. program in Science Education pursue a wide range of career paths. Many doctoral graduates assume faculty positions in elementary, middle or secondary education and/or teacher education at major research universities, as well as teacher preparation colleges. This degree prepares individuals to conduct science education research, teach science pedagogy and curriculum courses, and to create professional development programs for K-12 education. Some graduates also pursue careers as school district administrators.

Major Requirements
Doctoral study with an emphasis in applied exercise physiology is offered in conjunction with the School of Education’s Ph.D. program in science education. This highly individualized doctoral degree in Science Education with a concentration in exercise physiology is a research intensive program offered through the Science Education Department. In addition to course work, students work with their faculty mentor on various research projects. Students are encouraged to contact their potential faculty mentor directly prior to applying.

Special Education, PhD
For master’s degree programs see Early Childhood Special Education and Inclusive Special Education: 1-6 preparation and 7-12 preparation and Inclusive Special Education: Severe/Multiple Disabilities.

Contact:
Beth A. Ferri, 150 Huntington Hall, 315-443-2699, baferri@syr.edu;

Syracuse University has a long tradition of leadership in the field of special education and is recognized nationally and internationally. Syracuse University offered one of the first comprehensive programs of its kind in the United States and continues to be recognized for its leadership and vision in inclusive education. Throughout its fifty-year history, faculty and students in the program have engaged in critically important educational issues and concerns. Syracuse was among the first universities to bring attention to the educational needs of students with disabilities and to effectively develop and refine assessment and educational strategies for diverse learners. Syracuse also led the way in deinstitutionalization policy, research, and advocacy. Syracuse faculty and students continue this important legacy of promoting the rights of students with disabilities. In collaboration with area school districts, faculty and students have been instrumental in demonstrating ways of meaningfully integrating students with disabilities in general education classrooms.

Doctoral study should afford students the opportunity to examine critical issues in the field in the broadest possible contexts. It should encourage expansive thinking and developing new ways of examining important educational issues as well as in-depth study. At Syracuse University we pursue both aims by supporting broadly framed inquiry and in-depth investigations into particular, focused areas or issues. We have organized our program to address two interrelated foci: a concern for public policy affecting the lives of people with disabilities; and, the development of effective instructional programming for diverse learners. Doctoral students are asked to select one major emphasis: 1) Inclusive Educational Studies or 2) Disability Studies and Policy Studies. The purpose of selecting a major emphasis is to help bring focus to student’s coursework plans, research activities, internships, and career planning. Students are not limited to any one particular area and are encouraged to take courses and participate in seminars that expand or contribute to their research interests.

The doctoral concentration is designed to serve students who wish to pursue leadership positions in special education or related fields. This includes those who seek a career in the academy, or as field-based researchers, government/policy specialists, public and private agency/organization directors, program developers, and special education consultants and advocates. The majority of our graduates seek academic positions as faculty at colleges and universities.

Requirements for Courses on Methods of Research and/or Scholarly Inquiry
The Programs of Study must include 15 hours of courses in research methods. The minimal requirement of 15 research credit hours is usually best met by completing EDU 603 Introduction to Qualitative Research Methods and EDU 647 Statistical Thinking and Applications Methods

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of Educational Research, plus nine additional credit hours selected in consultation with your advisor to ensure both a depth and breadth of knowledge in research methods and to develop further expertise appropriate to his or her dissertation research.

The Ph.D. student may select other 12 credit sequences with the approval of his or her advisor. The student may take a research design course and a three course sequence in statistics, or may prefer a 12 credit hour sequence.

Research Apprenticeship Requirement

Ph.D. students must complete a research apprenticeship prior to beginning work on the dissertation. As part of this requirement the student must submit a completed research document in publishable format to the Higher Degrees Committee.

The research apprenticeship is usually supervised by a sole faculty member who is either the student’s program advisor or another member of the faculty. Some students complete the research apprenticeship experience within the context of a regular course (in which case the course instructor sponsors the apprenticeship). Other students conduct their apprenticeship independently. Still others conduct the apprenticeship without any formal hours attached to it.

Qualifying Examination Requirement

The students will take the Qualifying Examination when they have completed their coursework. The exam covers the major field and, if applicable, the minor or Certificate of Advanced Study (CAS).

Additional Information

Applications are reviewed in December and January for the following fall. A writing sample must be submitted when applying to the program.

Teaching and Curriculum, PhD

Contact:

for Ph.D. program, John W. Tillotson, 150 Huntington Hall, 315-443-9659, jwtillot@syr.edu

Major Requirements

The Doctor of Philosophy (Ph.D.) in Teaching and Curriculum program is designed to prepare experienced educators for research on teaching and learning, curriculum, teachers, and teacher education. It serves students who wish to study teaching-learning processes in several of the disciplines in elementary and secondary education and selected non-school contexts, the theory and practice of curriculum, the lives and careers of teachers, and policies and practices of teacher education. Through their programs of study, students develop scholarly agendas that will support careers as novice scholars, researchers, and teachers in higher education. Emphasis is placed on research design, implementation, and analysis, and forms of scholarly expression. An apprenticeship gives experience to novice researchers. Opportunities are provided for candidates to gain experience in college-level teaching. Graduates of this program are on the faculties at colleges and universities across the nation and abroad.

The Teaching and Curriculum programs are housed in and served by the Teaching & Leadership Programs unit of the School of Education.

The Ph.D. program in Teaching and Curriculum offers students the following advantages and opportunities:

- exposure to cutting edge ideas through courses and one-on-one study with faculty who are at the forefront of their fields;
- flexibility of program requirements, allowing for individualization within the 90 semester hours required to complete the program, building on general program and School of Education requirements;
- many courses offered in the late afternoon and evening to accommodate students completing their degree on a part-time basis;
- study and engagement with other students who bring diverse professional and personal backgrounds, from across the nation and internationally, to their graduate program experiences;
- a specialization which builds an area of particular expertise, such as elementary education, inclusive education, social studies education, art education, music education, teacher education, educational leadership, curriculum studies, or other areas as might be proposed;
- the opportunity to select courses from the wide variety of areas within Teaching & Leadership Programs, the School of Education, and from departments across Syracuse University: sociology, linguistics, nutrition, psychology, management, women's studies, computer and information science, African-American studies, nursing, and public communication are among the fields that have been integrated into doctoral programs in Teaching and Curriculum;
- a dynamic School of Education that has national and international reputation of excellence and commitment to the field of education.

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.
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.

**Cultural Foundations of Education, JD/MS**

Program Requirements

The College of Law's joint degree program in law and education, with a concentration in disability studies, offers students the opportunity to earn a J.D. and an M.S. in Cultural Foundations of Education. Eligible joint degree students also may earn a certificate of advanced study (C.A.S.) in disability studies, which is a New York State-approved concentration. Disability studies applies legal, social, cultural, historical, and philosophical perspectives to the study of disability in society. Students may obtain the J.D. and M.S. in three years instead of the four necessary to earn both degrees independently. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

**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.

**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.
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.

**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 Latino-Latin 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/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 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.

**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.
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 msarno@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.

Cultural Foundations of Education, CAS

Contact:
Barbara Applebaum, Chair, 363 Huntington Hall, 315-443-3343, bappleba@syr.edu
Cultural Foundations of Education is a highly demanding and nationally prominent interdisciplinary graduate program created to support fundamental inquiry into the nature of education. Graduate students draw on the disciplines of history, philosophy, and sociology to analyze issues related to inequality in education. Faculty interests include disability, the relationship of popular culture and mass media to education, race, racism and multiculturalism, identity and difference, democracy and education, intergroup dialogue, theories of knowledge and feminist theory. Our alumni have success finding jobs in higher education, foundations, policy research, school systems, and government agencies.

Each program is individually designed, allowing students to work with their advisors to build their own program around their research interests. This may include courses from other Syracuse University programs and colleges, including the Maxwell School of Citizenship and Public Affairs, the S.I. Newhouse School of Public Communications, and the College of Arts and Sciences. At the same time, cohorts of students take courses in the department together so that students share a common vocabulary.

Faculty members are well-known in their fields and actively engaged in ongoing research. The department’s outstanding graduate students collaborate with faculty in research, publishing, and professional activities. The department regularly sponsors opportunities for students and faculty to share their work, discuss current issues, or read and critique current articles. There is a strong emphasis on community amongst scholars.

Certificate Requirements
The Certificate of Advanced Study (C.A.S.) in Cultural Foundations of Education is a highly-demanding, interdisciplinary program created to support fundamental inquiry into the nature of education. Students draw on disciplines of history, philosophy, and sociology to analyze such issues as inequality, disability, the relationship of popular culture and mass media, and the philosophy of multiculturalism and racism in education. C.A.S. students must complete 60 graduate credits, at least half of them from Syracuse University. All C.A.S. students must take a qualifying examination and complete a project, which usually coincides with one or more field experiences.

Designing Digital Instruction (CAS)

Contact
Tiffany A. Koszalka, PhD
Professor and Chair IDD&E
330 Huntington Hall
315 443 5263
Linda Tucker - IDD&E Program administrator
315 443 3703

Faculty
Tiffany A. Koszalka, Professor
Jing Lei, Associate Professor
Alexander Romiszowski, Research Professor
Charles Spuches, Adjunct Professor
Robert Pusch, Adjunct Professor

Program Description
The Graduate Certificate in Designing Digital Instruction (15 credits) provides the opportunity to develop the competencies required to design digital resources and online or e-learning instruction. The courses are carefully combined into a fully online program that is built on a framework of internationally validated standards for instructional designers, online instructors, and online learners. This provides candidates with a 360-degree (designer, instructor, learner) view of digital instruction and learning facilitating them in learning how to design and create sound instructional resources and environments that will lead to quality learning experiences. In addition to the course work, candidates will be required to develop a digital portfolio that consists of both sample digital projects and reflections on their development of instructional designer, online instructor, and online learner competencies.

This program has been registered with the New York State Education Department and provides professionals with the opportunity to advance their knowledge and skills in the area of instructional design and learning with digital technologies.

Certificate Requirements
This certificate program is offered by the Instructional Design, Development and Evaluation Department (IDD&E). IDD&E offers a variety of programs to help students develop the skills required to identify and evaluate learning problems and to design and develop appropriate instructional solutions to these problems. Students develop the competencies to apply instructional analysis, design and develop instructional materials, evaluate instructional programs, and assess learning. The curriculum includes teaching students about a variety of soft (process and communication) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate technology-supported instructional solutions for a variety of educational and professional settings. Certificates are offered in Designing Digital Instruction (15 credits), Educational Technology (15 credits), and Instructional Design Foundations (12 credits); a master's of science degree is offered in Instructional Technology for NYS K-12 permanent certification; as well as M.S., C.A.S., and Ph.D degrees in Instructional Design, Development and Evaluation.

Curriculum of the Certificate in Designing Digital Instruction (15 credits)
Required - 4 courses (12 credits)
- IDE 611 - Technologies for Instructional Settings 3 credit(s)
- IDE 756 - Design of Online Courses 3 credit(s)
- IDE 761 - Strategies in Educational Project Management 3 credit(s)
- IDE 737 - Advanced Instructional Design 3 credit(s)
Elective - Choose 1 course (3 Credits) from the list below
- IDE 764 - Planned Change and Innovation 3 credit(s)
- IDE 771 - Methods and Techniques for Teaching and Training Adults 3 credit(s)
- IDE 656 - Computers as Critical Thinking Tools 3 credit(s)
- IDE 772 - Educational Technology in International Settings 3 credit(s)

Required Portfolio: Reviewed by advisor as a final assessment of the program, using rubric.
- Sample digital projects: (Foci: design-interactive & reflective; facilitating-activity & social engagement)
- Self-reflection: Instructional Designer competencies, Instructor competencies, Online
Disability Studies, CAS

Contact
Alan Foley, Program Coordinator, 350 Huntington Hall, 315-443, 3343 afoley@syr.edu
Program website: disabilitystudies.syr.edu

Disability Studies at Syracuse University applies social, cultural, historical, and philosophical perspectives to disability in society. Building on the proud tradition of Syracuse University’s School of Education with faculty across campus, the program is designed to help students understand disability and to prepare them to work to overcome barriers to full participation of all people in society.

The Disability Studies program focuses on disability as social phenomenon, social construct, metaphor, identity, and culture. Consistent with the Syracuse tradition, this program stands at the forefront of the development of the theoretical, research, educational, and advocacy models necessary to remove the legal, physical, policy, and attitudinal barriers that exclude people with disabilities from society.

Certificate Requirements
The Certificate of Advanced Study (CAS) program includes 15 semester-hours of graduate courses in Disability Studies and related areas. The CAS program is ideally suited for students who want to demonstrate that they can teach, conduct research, or work in the area of disability studies, along with other fields in which they are studying or have studied (e.g., special education, rehabilitation counseling, law, the social sciences).

You do not need to be enrolled in a graduate degree program at SU to enroll in the CAS in Disability Studies. The CAS is designed to provide career enhancement opportunities to non-degree program students.

PROGRAM OF STUDY
The Disability Studies CAS may be completed through one of two format options:

- classes on the Syracuse University campus, possibly mixed with some online classes; or
- entirely through online classes.

Each student develops a program of study in consultation with a Disability Studies faculty advisor. The program must be completed within 5 semesters, and all 15 credits for the CAS must be earned through Syracuse University. The program of study must include:

- At least 9 (of the 15) credits (3 classes) with the DSP prefix;
- A CAS examination (taken in the last semester of coursework)

Educational Leadership, CAS

Contact:
Tiffany A. Koszalka, Chair, 259 Huntington Hall, 315-443-3703, takoszal@syr.edu

The Graduate Certificate in Educational Leadership (15 credits) provides interested teachers, trainers, and other professionals with the opportunity to advance their knowledge and skills in the area of instructional systems, learning environments, and performance technology. This program has been registered with the New York State Education Department and is designed for students who require additional knowledge and expertise in order to advance in their professional careers.

Certificate Requirements
This certificate program is offered by the Instructional Design, Development and Evaluation Department (IDD&E). IDD&E offers a variety of programs to help students develop the skills required to identify and evaluate learning problems and to design and develop appropriate instructional solutions to these problems. Students develop the competencies to apply instructional analysis, design and develop instructional materials, evaluate instructional programs, and assess learning. The curriculum includes teaching students about a variety of soft (process and communication) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate technology-supported instructional solutions for a variety of educational and professional settings. Certificates in educational technology (15 credits), professional practices in educational technology (24 credits) and instruction design foundations (12 credits), as well as M.S., C.A.S., and Ph.D. degrees are offered.

Curriculum of the Certificate in Educational Technology (15 Credits):

- IDE 611 - Technologies for Instructional Settings 3 credit(s)
- IDE 621 - Principles of Instruction and Learning 3 credit(s)
- IDE 631 - Instructional Design and Development I 3 credit(s)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)

Plus ONE of the following courses

- IDE 651 - Message Design for Digital Media 3 credit(s)
- IDE 656 - Computers as Critical Thinking Tools 3 credit(s)

Instructional Design Foundations, CAS

Contact:
Tiffany A. Koszalka, Chair, 259 Huntington Hall;
School of Education

315-443-3703 takoszal@syr.edu

Description:
There is a growing population of professionals in business and industry, higher education, non-profits and social services organizations, government and military, healthcare and insurance, media, and other contexts who find themselves in positions related to training and professional development, yet have little knowledge about how to design effective and efficient instruction. This certificate will provide students with a foundational knowledge of Instructional Design and help them begin developing competencies to practice.

Admission:
Bachelor’s degree (3.0 GPA); SU School of Education UG seniors may begin to take these courses, by permission, prior to graduating and transfer them to the graduate certificate if courses not taken to satisfy UG requirements.

Required coursework:
- IDE 621 - Principles of Instruction and Learning 3 credit(s)
- IDE 631 - Instructional Design and Development I 3 credit(s)
- IDE 632 - Instructional Design and Development II 3 credit(s)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)

Total Credits: 12

Degree Awarded:
Certificate of Advanced Study in Instructional Design Foundations

Transfer Credit:
None

Part-time Study:
Yes

Satisfactory Progress:
Four (4) required courses with at least a 3.0 GPA.

Instructional Design, Development and Evaluation, CAS

Contact:
Tiffany A. Koszalka, Chair, 259 Huntington Hall, 315-443-3703, takoszal@syr.edu

The Instructional Design, Development and Evaluation Department (IDD&E) offers a variety of programs to help students develop the competencies required to identify and evaluate learning and performance problems and to design, develop, and implement appropriate instructional solutions to these problems. Students develop competencies to conduct instructional analysis, make appropriate design decisions, develop instructional materials, implement and evaluate instructional programs, and assess learning. The curriculum includes courses that blend soft technologies (thinking models and theories, strategic planning, IDD&E processes, interpersonal communications, and software) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate non-technology and technology-supported instructional solutions for a variety of educational and professional settings. Certificates are offered in Designing Digital Instruction (15 credits), Educational Technology (15 credits), and Instructional Design Foundations (12 credits); a master’s of science degree is offered in Instructional Technology for NYS K-12 permanent certification; as well as M.S., C.A.S., and Ph.D. degrees in Instructional Design, Development and Evaluation.

Certificate Requirements
The 60-credit C.A.S. builds upon the master’s degree, preparing students for higher-level positions in education, industry, or academia. People seeking career advancement in positions such as Instructional and Curriculum Coordinator, Project and Performance Technology Manager, Design and Development Specialist, E-learning Specialist, Evaluation and Assessment Specialist, and Technology Coordinator may wish to pursue this program.

Media & Education, CAS

Contact information for the CAS programs
Michael Schoonmaker, Co-director, M&E; Chair, TRF, msschoon@syr.edu.315-443-2150
Jeffrey Mangram Co-director, M&E; Program Coordinator, Social Studies Education, jamangra@syr.edu
Jeffrey Mangram, Co-director, M&E; Program Coordinator, Social Studies Education, jamangra@syr.edu
Maryann Barker, mbarker@syr.edu, 315-443-3343

Certificate Awarded:
Certificate of Advanced Study in Media & Education

Description
This program brings together the fields of media and education, and is offered jointly by the School of Education and the S.I. Newhouse School of Public Communications. Using broad definitions, we see media as an umbrella term for a range of forms that communicate to a public and we define education as occurring in both formal settings like schools and informal arenas like popular culture. This program addresses media production and analysis in relation to visual storytelling, combining an analysis of core issues in education with visual storytelling creation and production skills. The program also speaks to the cultural terrain of how people both make and make sense of media.

Certificate Requirements
The CAS program is designed for educators who want to learn more about public media-video, film, television, radio, music recording and incarnations of these forms on the web-both how to make media in order to tell stories (or to help their students tell stories) and how to analyze them to incorporate into their pedagogy. Students in the program will learn to increase their visual storytelling skills in order to make films about or help students document their lives and the issues they care about. Because assumptions about education, identity and difference are always visible in the documentary process, the program will also work with students on the assumptions they bring to filmmaking.

Admission:
The CAS program follows Syracuse University's general guidelines for admission of graduate study. That is, applicants must present respectable evidence of excellence with depth and dimension in their records. The review committee expects to admit students with an exemplary transcript, extraordinary letters of recommendation, a personal statement that reflects potential growth, and a demonstrated experience in education and/or media studies. Also, we will use the "Like-Live" interface to collect unrehearsed video responses to questions about goals and qualifications in relation to media and education.

Required Courses
- TRF 606 - Visual Storytelling for Education 3 credit(s)
- CFE 662 - Youth, Schooling and Popular Culture 3 credit(s)
- M&E 601 - Media and Education CAS Colloquium 1 credit(s)
- M&E 621 - Media and Education Practicum: Project Development 3 credit(s)
- M&E 622 - Media and Education Practicum: Production 3 credit(s)
- M&E 650 - Special Projects Seminar 2 credit(s)

Transfer Credit:
Transfer credit will be considered on a case-by-case basis, up to a maximum of 3 credits.
Part-time Study:
This program requires part time study. Three weeks of the program take place on campus, with course assignments for the on-campus courses, and the required project completed by the student at home. Their project work will consist of applications of concepts from studies in the program to educational objectives in learning environments they work in, i.e. making an educational video, integrating media into classroom pedagogy and documenting it, or documenting an educational problem through visual media in conjunction with students.

Satisfactory Progress:
3.0 (B or better) average in all courses.

Professional Practice in Educational Technology, CAS

Contact:
Tiffany A. Koszalka, Chair, 330 Huntington Hall, 315-443-3703, takoszalk@syr.edu

The Graduate Certificate of Professional Practice in Educational Technology (24 credits) provides interested teachers, trainers, and other professional practitioners with the opportunity to advance their knowledge and skills in a selected area of specialization within educational technology. This certificate program requires successful completion of the Certificate in Educational Technology. Students completing this certificate program will be qualified in a particular educational technology specialty and be prepared for careers as performance technologies, instructional designers, developers of distance learning and interactive training, or evaluation specialists. This program has been registered with the New York State Education Department and is designed for students who require additional knowledge and expertise in order to advance in their professional careers.

This certificate program is offered by the Instructional Design, Development and Evaluation Department (IDD&E), IDD&E offers a variety of programs to help students develop the skills required to identify and evaluate learning problems and to design and develop appropriate instructional solutions to these problems. Students develop the competencies to apply instructional analysis, design and develop instructional materials, evaluate instructional programs, and assess learning. The curriculum includes teaching students about a variety of soft (process and communication) and hard technologies. Through practical projects, students develop competencies to design, create, implement, and evaluate technology-supported instructional solutions for a variety of educational and professional settings. Certificates in educational technology (15 credits), professional practice in educational technology (24 credits) and instructional design foundations (12 credits), as well as M.S., C.A.S., and Ph.D. degrees are offered.

Curriculum for the CAS in Professional Practices in Educational Technology:
(24 Credits)

Certificate in Educational Technology (15 credits) and:
- IDE 632 - Instructional Design and Development II 3 credit(s)

Plus Two courses in one of the following areas:

Interactive Technology and Distributed Learning:
- IDE 656 - Computers as Critical Thinking Tools 3 credit(s)
- IDE 756 - Design of Online Courses 3 credit(s)

Design and Development:
- IDE 712 - Analysis for Human Performance Technology Decisions 3 credit(s)
- IDE 737 - Advanced Instructional Design 3 credit(s)

Evaluation:
- IDE 741 - Concepts and Issues in Educational Evaluation 3 credit(s)
- IDE 742 - Introduction to Survey Research 3 credit(s)

Management and Human Resource Development:
- IDE 761 - Strategies in Educational Project Management 3 credit(s)
- IDE 764 - Planned Change and Innovation 3 credit(s)

Additional Information
Each course is 3 credits

School Counseling, CAS

Contact
Melissa Luke, Ph.D. Sims Hall Suite 440, 315-443-2266, mmluke@syr.edu

The Certificate of Advanced Study (C.A.S.) prepares students in more scholarly depth than does the Master's degree and meets the New York State academic requirements for permanent school counselor certification. The C.A.S. is appropriate both for students with a Master's in school counseling and for students who have a Master's in another specialty within counseling, but wish to pursue New York State certification as a school counselor.

Core Faculty
Dr. Nicole R. Hell, Department Chairperson
Dr. James Bellini, Professor
Dr. Jason Duffy, Visiting Assistant Professor
Dr. Melissa Luke, Professor
Dr. Derek Seward, Associate Professor
Dr. Linwood G. Vereen, Associate Professor

The Certificate of Advanced Study (C.A.S.) prepares students in more scholarly depth than does the Master's degree and meets the New York State academic requirements for permanent school counselor certification. The C.A.S. is appropriate both for students with a Master's in school counseling and for students who have a Master's in another specialty within counseling, but wish to pursue New York State certification as a school counselor.

In order to better meet the career needs and interests of our students, the Counseling and Human Services faculty voted to allow current students the opportunity to apply to the Certificate in Advanced Study (C.A.S.) program in School Counseling following successful completion of practicum. The revised application process will allow our current students increased opportunities for course selection if they are interested in, and admitted into the C.A.S. program. As has always been the case, the C.A.S. in School Counseling which leads to state credentialing as a school counselor is open to students across the School Counseling, Student Affairs, and Clinical Mental Health master's programs.

Programs include extensive fieldwork opportunities in which students gain hands-on experience working with students and clients in a wide range of counseling and educational settings. Students work closely with their advisor, and the fieldwork coordinator to identify settings that meet their individual interests and career goals. The faculty is nationally recognized for their leadership in the profession and all classes are taught by skilled experts and experienced clinicians.

The faculty is deeply committed to the growth and development of their students; faculty work closely with both our master's and doctoral students. Students are trained in the most current information in counseling and provided the opportunity to develop their skills and succeed in their chosen area of specialization. The department's goal is to prepare national leaders in counseling. It seeks to develop a diverse group of professionals who will excel in knowledge,
functions, such as budgeting, accounting, facilities management, information technology, procurement, human resources (personnel) management, labor negotiations, food service and transportation. Besides meeting the requirements for SDBL certification in New York State, the program provides coursework and field experiences that prepare candidates to fulfill all professional functions of school business management specified by the Association of School Business Officials (ASBO). Besides an introductory course in Issues and Practices in School District Leadership, the program includes coursework in six areas of study:

- Financial management and management of ancillary services.
- Education leadership and management.
- Education law.
- Human resource management.
- Microeconomics.
- Program evaluation.

Certificate Requirements

A required practicum experience (a 600-hour clinical internship, typically spread over spring, summer and early fall semesters) completes the course structure of the program.

To receive certification as a school district business leader a student must have 60 graduate credits and a Master's degree. The SDBL program itself consists of courses (including the internship) accounting for 37 of these graduate credits. The number of courses that a student is required to take varies depending on her/his previous graduate experience. Candidates who have either completed or are concurrently pursuing a Certificate of Advanced Study in Educational Leadership or a Master's of Public Administration are likely to have already completed some courses required under the SDBL program. Each student will take at least thirteen (13) graduate credits toward the SDBL that are not included in some other program. Certification and (under most circumstances) program completion also require that the candidate pass a New York State administered examination in School District Business Leadership.

The following courses are required by the program. (We have marked below those that are either required or elective courses in our CAS program in educational leadership for school district and school building leaders (CAS) or our MPA program in public administration (MPA), which candidates may already have taken or may be taking simultaneously to secure those degrees.):

- EDA 792 - Legal Basis of Education 3 credit(s) (CAS)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)
- PAI 709 - Research Consultancy in Public Diplomacy 3 credit(s) (MPA)
- PAI 722 - Quantitative Analysis 3 credit(s) (MPA)
- PAI 723 - Economics for Public Decisions 3 credit(s) (MPA)
- PAI 731 - Financial Management in State and Local Governments 3 credit(s) (MPA)
- PAI 734 - Public Budgeting 3 credit(s)
- PAI 735 - State and Local Government Finance 3 credit(s) (MPA)
- EDA 899 - Internship in Educational Administration and Supervision 3-4 credit(s) (This internship seminar is completed at the end of the program)
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, Associate 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

Shari Bey, Associate Professor
Ph.D. Pennsylvania State University 2007
Community based arts programming, African-American art education history, unofficial Slovak art, post Soviet art education reforms, conceptual art and its implications to art education.

Benita Ann Blachman, Emeritus 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.

Rachel Brown, Associate Professor
Ph.D., University of Maryland, 1994
Reading, strategy, instruction, cognition, instructional technology

Tom Brutsaert, 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 instructional leadership as it relates to supporting teacher effectiveness.

Julie Causton, 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, Associate Dean for Research
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 Dall, Assistant Professor
Ph.D., Vanderbilt University 2004
Reading and Language Arts

Elisa Dekenay, 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, disuse-mediated skeletal muscle atrophy

Helen M. Doerr, Laura J. and L. Douglas Meredith Emeritus Professor
Ph.D., Cornell University, 1994
Secondary mathematics education, teacher and student learning, mathematical modeling, and mathematical communication.

Benjamin H. Dotger, 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, Associate Professor
Ph.D., University of Illinois-Champaign, 2001
Educational equity; higher education; publicly engaged scholarship, faculty rewards; institutional planning and leadership; P-16; institutional collaboration; diversity, STEM success

Catherine M. Engstrom, Associate Professor
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, Director, Center on Human Policy
Ph.D., University of Wisconsin, 2001
Curriculum and instruction, educational communications and technology

Michael Gill, Assistant Professor
Ph.D., University of Illinois at Chicago, 2009
Disability studies; intellectual disability; feminist theory; film theory including melodrama and masculinity; representational history of disability; theories in sexuality

Duane Graysay, Assistant Professor
Ph.D., Pennsylvania University, 2016
Mathematics education; diverse student populations

Marcelle Haddix, Dean's Assistant Professor, Chair
Ph.D., Boston College, 2008
English education, critical literacy, racial and linguistic diversity in teacher education

Kevin Heffernan, Associate 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

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. Hinckman, Professor, Associate Dean
Ph.D., Syracuse University, 1985
Adolescent literacy and literacy teacher education

Bong Gee Jang, Assistant Professor
Ph.D., Curry School of Education, University of Virginia, 2013
Reading education; literacy motivation and engagement; digital literacies, adolescent literacy/disciplinary literacy, literacy in education global contexts; qualitative research methods

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

Eun Jung Kim, Assistant Professor
Ph.D., University of Illinois at Chicago, 2007
Disability studies; gender and women's studies

David Knapp, Assistant Professor
Ph.D., Florida State University, 2012
Music education; music teacher education; community music; music education and Islam
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, 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 O. Masingila, Laura J. and L. Douglas Meredith Professor, 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 Urbana-Champaign, 1988
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

Dalia Rodriguez, Associate Professor
Ph.D., University of Illinois, Champaign-Urbana, 2005
Racial inequality, qualitative research methods, policy studies

James Haywood Rolling 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, Associate 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

Gwendolyn A. Thomas, Assistant Professor
Ph.D., University of Connecticut, 2010
Kinesiology; exercise science

George Theohars, Associate Professor, Chair
Ph.D., University of Wisconsin-Madison, 2004
School leadership, inclusive education, elementary social studies

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

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,
School of Education

Courses

American Sign Language

ASL 601 - American Sign Language I for Professional Practice  
School of Education  
3 credit(s) Every semester  
Introduction to American Sign Language 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 602 - American Sign Language II for Professional Practice  
School of Education  
3 credit(s) At least 1x fall or spring  
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 601

ASL 603 - American Sign Language III for Professional Practice  
School of Education  
3 credit(s) Upon Sufficient student interest  
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 602

Cultural Foundations of Education

CFE 600 - 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 601 - Intro Phil of Education  
School of Education  
3 credit(s) Irregular  
Philosophical analysis of educational concepts and practices. Issues underlying conflicting educational ideologies of teaching and learning, knowing, judging, valuing, citizenship, community, and philosophical anthropology.

CFE 605 - Race, Philosophy and Education  
School of Education  
3 credit(s) Irregularly  
Questions around race, racism, and education are explored from the perspective of philosophers and explorers of education. Examines the "politics of recognition," "colorblind ideology" the social construction of race, essentialism, intersectionality, whiteness, and white privilege.

CFE 611 - Intro Comparative Ed  
School of Education  
3 credit(s) Irregularly  
Comparative methodology. Problems in education comparatively and from a cross-cultural point of view.

CFE 614 - Critical Issues in Dis/Ability and Inclusion  
School of Education  
3 credit(s) At least 1x fall or spring  
Crosslisted with: DSP 614  
Social construction of disability and special education. Disability autobiographies, research literature, parent narratives, legal/policy issues, shifting notions and cultural context of disability, and school and community inclusion. Review of disability classifications as they relate to these issues.

CFE 621 - History of Education in the United States  
School of Education  
3 credit(s) Irregular  
History of educational institutions from the Puritan colonies to the present. Factors that led to the development of the unique system of education in the United States.

CFE 631 - Introduction to Sociology and Anthropology of Education  
School of Education  
3 credit(s) Irregularly  
Concepts, levels of organization, and processes relevant to the analysis of education. Sociological and anthropological studies of the school, its personnel, and its internal and external systems.

CFE 640 - Inequality and Intergroup Relations in Education  
School of Education  
3 credit(s) At least 1x fall or spring  
Examines theory, research, and practice important for intergroup relations in education, within context of racial, ethnic, and class inequalities in broader U.S. society. Covers conceptual foundations and frameworks for social justice education and intergroup dialogue.

CFE 662 - Youth, Schooling and Popular Culture  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: WGS 662  
Double Numbered with: CFE 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.

CFE 688 - Social Policy and Disability  
School of Education  
3 credit(s) Irregular  
Crosslisted with: DSP 688, SPE 688  
Trends and issues in the field and forces within society (political, economic, cultural, historical, and social) that affect people with disabilities.

CFE 700 - 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 701 - Education and Social Philosophy  
School of Education  
3 credit(s) Irregularly  
Philosophical problems underlying alternative theories of society, citizenship, and the individual. Each in relation to educational policy and practice.

CFE 710 - Critical Whiteness Theory and Education  
School of Education  
3 credit(s) Irregularly  
This course examines a small but growing body of philosophical scholarship that critically engages whiteness in order to better understand white subjectivity, white complicity, white resistance to knowing, and white agency. Educational implications of this scholarship are emphasized.

CFE 723 - Representation of Ability and Disability  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: DSP 724  
Constructions, meanings, and markers of ability/disability. How representation relates to educational research and practice.
CFE 725 - Gender and Race in Higher Education
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: HED 725, WGS 725
Examines the influence of gender and race in historical and contemporary higher education from interdisciplinary perspective; considers dynamics of power, privilege, and oppression; includes topics related to student and faculty experiences, and curricular issues.

CFE 731 - Intermediate Sociology and Anthropology of Education
School of Education
3 credit(s) Irregularly
Sociological and anthropological analyses of education. Prevailing perspectives of people, society, and culture; their implications for various roles in and functions of education.

CFE 775 - Gender, Sexuality, and Disability
School of Education
3 credit(s) Irregularly
Crosslisted with: DSP 775
Interdisciplinary course, explores points of contact and conflict between feminist theory and disability studies. Embodiment, representation, and voice explored from a variety of disciplines and genres.

CFE 776 - Gender, Education & Culture
School of Education
3 credit(s) Even Academic Years
Crosslisted with: DSP 776, WGS 776
How gender is culturally constructed in American society with particular reference to education broadly conceived; how race and social class influence gender analysis.

CFE 801 - Educational Theory and the Social Sciences
School of Education
3 credit(s) Irregularly
Some major works of sociological and anthropological thought as works of educational theory. Writings of Durkheim, Weber, Parsons, and Manheim as they bear directly upon education.

CFE 809 - Problems of Educational Theory
School of Education
3 credit(s) Upon sufficient interest
Criteria, construction, and application of educational theories. Problems with a theoretical basis. May be repeated for credit as the problems for analysis change.

CFE 810 - Foundations of Moral Education
School of Education
3 credit(s) Upon sufficient interest
Foundations of moral learning and elements of its pedagogy as rooted in major texts of Western moral reflection, including Plato’s The Republic, Nichomachean Ethics, Durkheim’s Lecture on Moral Education, and selections from Kant.

CFE 813 - Multicultural Narratives and Educational Change
School of Education
3 credit(s) Irregularly
Narratives from diverse ethnic/racial, gendered, and cultural positions. Questions of representation in narrative analysis. Place of narrative in social sciences. Role of narrative in educational change. Relationships of stories to theory, self to other.

CFE 821 - Historiography in Education
School of Education
3 credit(s) Irregularly
Historiographic grounding for historical research methods. Seminar on the traditional categories, methods, and tools of historical research. Using student-generated topics, the seminar explores the consequences of common methodological choices.

CFE 825 - Seminar in Problems of Educational Change
School of Education
3 credit(s) Irregularly
Repeatable
Different topic selected each semester. Enrollment limited to 10 students.

CFE 880 - Seminar in Problems of International and Comparative Education
School of Education
3 credit(s) Irregularly
Substantive problems and topics, such as educational planning, education and development, international educational relations.

CFE 882 - Seminar in Philosophy of Education
School of Education
3 credit(s) Upon sufficient interest
Different topic selected each semester. Enrollment limited to 10 students.

CFE 900 - Seminar in Philosophy of Education
School of Education
3 credit(s) Irupon sufficient interest
Different topic selected each semester. Enrollment limited to 10 students.
Repeatable

CFE 910 - Seminar in Problems of Educational Change
School of Education
3 credit(s) Irregularly
Different educational topic each semester. Enrollment limited to 10 students.
Repeatable

CFE 920 - Seminar in History of Education
School of Education
3 credit(s) Irregular
Different educational topic each semester. Enrollment limited to 10 students.
Repeatable

CFE 926 - Social and Cultural Dimensions of Counseling
School of Education
3 credit(s) At least 1x fall or spring
Theory and research related to counseling persons of different cultural identities. A broad definition of cultural as premise for increasing student

CFE 930 - Sociology and Anthropology of Education: Seminar in Special Topics
School of Education
3 credit(s) Irregular
Crosslisted with: DSP 930
Dialogue between students of education and those of sociology, anthropology, and related fields on issues of mutual interest. Evaluation of potential contributions of various fields to the solution or clarification of these issues.

Repeatable

Counseling

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.

Repeatable

COU 600 - Selected Topics in Counseling
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

COU 612 - Professional Orientation & Ethical Practice
School of Education
3 credit(s) Every semester
The historical development of counseling, legal and ethical issues, professional identity, and professional counseling roles and practices in various settings.

COU 614 - Group Work in Counseling
School of Education
3 credit(s) Every semester
Principles of group dynamics, group developmental stage theory, leadership styles, and group leadership methods, with a focus on the integration of practice and theory in multiple group contexts. Course includes student participation in a within-class group experience. Permission of instructor.

COU 624 - Theories of Counseling
School of Education
3 credit(s) At least 1x fall or spring
Counseling theories: their psychological assumptions, the therapeutic process inherent in each, and the expected outcomes of successful counseling.

COU 626 - Social and Cultural Dimensions of Counseling
School of Education
3 credit(s) At least 1x fall or spring
Theory and research related to counseling persons of different cultural identities. A broad definition of cultural as premise for increasing student
awareness and knowledge of how culture affects the counseling process.

**COU 628 - Life-Span Human Development**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Developmental theory and research pertaining to change and consistency across the lifespan. Focus on the facilitation of human development for persons of varying background and experience. Application of developmental principles to counseling practice.

**COU 642 - Career Development**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
The meaning of work for individuals and within cultural contexts; theories of career development; using computers in career counseling; vocational decision making; and career counseling strategies for working with diverse populations including persons with disabilities.

**COU 644 - Counseling Prepracticum**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Introduction to counseling skills and techniques, including assessment, relationship building, goal setting, and therapeutic intervention. Extensive use of video and audio taping of role-played counseling interactions. Permission of instructor.

**COU 645 - Counseling Prepracticum II: Advanced Multicultural Counseling Skills**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Clinical and case conceptualization skills for working with diverse populations. Race, ethnicity, culture, gender, sexual orientation, ability, and religion, with focus on applicability for counseling practice.  
**PREREQ:** COU 644  
**COREQ:** COU 626

**COU 646 - Assessment in Counseling**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Analysis and interpretation of selected interest and personality tests, as well as assessment environments. Synthesis of comprehensive case data and report writing in educational, vocational, and general counseling. Assessment of individuals and families.

**COU 651 - Crisis Counseling**  
*School of Education*  
3 credit(s) Only during the summer  
Review of the theory, history and practice of crisis counseling. Emphasis is placed on the study of techniques and interventions appropriate for use in a variety of crisis situations.

**COU 672 - Counseling Children and Adolescents**  
*School of Education*  
3 credit(s) Only during the summer  
Specialized knowledge, skills, and awareness necessary for counseling children and adolescents within individual, group, and family counseling modalities. Developing a therapeutic relationship and implementing effective interventions.

**COU 675 - Substance Abuse Counseling**  
*School of Education*  
3 credit(s) Irregularly  
Biological, psychological, and social factors contributing to chemical dependency. Overview of different theoretical approaches to substance abuse counseling. Discussion, demonstration, and practice of counseling strategies for prevention and intervention.

**COU 676 - Child Centered Play Therapy**  
*School of Education*  
3 credit(s) Irregularly  
Theoretical and applied philosophical understanding of child-centered play therapy. Reflective listening, tracking, limit setting, selecting props, structuring sessions, identifying themes, using consultation, etc., to conduct individual, dyadic, group and filial therapy. Cross-cultural relationships.

**COU 700 - Selected Topics in Counseling**  
*School of Education*  
1-6 credit(s)  
**Repeatable 1 time(s), 6 credits maximum**

**COU 723 - Psychological, Social, and Cultural Aspects of Disability**  
*School of Education*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Crosslisted with: DSP 723  
Survey of the psychological, social, and cultural dimensions of disability with a focus on implications of social construction of disability for the adjustment of persons with disabilities in educational, rehabilitation, and community settings.

**COU 727 - Foundations of Mental Health Counseling**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Roles, functions, and contexts for mental health counselors working in community agencies. A review of dimensions, interventions, and characteristics of agencies serving diverse populations. Foundations of mental health consultation, prevention, and program evaluation.

**COU 729 - The Counselor in the Schools**  
*School of Education*  
3 credit(s) Odd academic yr e.g. 2007-8  
Roles and functions of school counselors. Analysis of the history, development, implementation and evaluation of school counseling programs, K-12.

**COU 749 - Leadership and School Counseling Program Implementation**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Critical issues in schools. Implementation of comprehensive K-12 developmental school counseling program: models, strategies, and interventions to work effectively as school counselors at different school levels. School counseling majors only.  
**PREREQ:** COU 729  
**COREQ:** COU 790

**COU 750 - Practicum in Counseling**  
*School of Education*  
3 credit(s) Every semester  
A one-semester, 100-hour, clinical placement to advance the student's counseling skills. Video or audio taping at the practicum site is required for supervision. Students receive weekly individual and group supervision on campus.  
**PREREQ:** COU 624 AND COU 644  
**Repeatable 1 time(s), 6 credits maximum**

**COU 758 - Research Methods**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Methods, strategies, and issues related to research. Includes evaluating knowledge claims, quantitative and qualitative research designs, statistical analyses, and research ethics. Critical review of the professional literature for application to professional practice.

**COU 790 - Internship in Counseling**  
*School of Education*  
3-6 credit(s) Every semester  
A supervised field placement in a school, agency, college, or rehabilitation setting during which students assume the varied roles of counselor. Weekly individual supervision and group supervision are required. Internships must meet all accreditation guidelines.  
**PREREQ:** COU 750  
**Repeatable 1 time(s), 6 credits maximum**

**COU 800 - 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**
COU 860 - Advanced Practicum in Counseling
School of Education
3 credit(s) Every semester
Supervised counseling experience for doctoral students. Intended to expand skill sets and level of ability through involvement in complex and diverse counseling situations. Empirically supported treatment is emphasized.
Repeatable 1 time(s), 6 credits maximum

COU 872 - Advanced Theory and Practice in Group Work
School of Education
3 credit(s) Irregularly
An advanced graduate course that reviews seminal contributions to group work as well as current research trends. Includes supervised experience in facilitating personal growth groups. Permission of instructor.

COU 874 - Theory and Practice of Clinical Supervision
School of Education
3 credit(s) At least 1x fall or spring
Major conceptual approaches, methods, and techniques; evaluation; and ethical and legal issues. Strategies for working with supervisees representing diverse backgrounds, developmental levels, and learning styles. Supervised practice opportunities included.
Repeatable 1 time(s), 6 credits maximum

COU 876 - Ecological Issues in Counselor Education & Supervision
School of Education
3 credit(s) Irregularly
Client, professional, and student issues as embedded within multiple and interrelated systems, including political and economic structures. Culturally relevant pedagogy, counseling, research, leadership, and supervision. For doctoral students only.

COU 878 - Seminar in Counseling Theory
School of Education
3 credit(s) Irregularly
Examines psychological theory construction, compares various theoretical formulations of the counseling process, and emphasizes participants' critical analysis of how such theories relate to one's personal theoretical orientation and counseling practice. Theories representing distinct literatures within counseling are included. Permission of instructor.

COU 882 - Seminar in Professional Issues
School of Education
3 credit(s) Irregularly
Designed for advanced graduate students, this course explores key issues currently faced by counselors, supervisors, and counselor educators. Topics are identified through a review of current professional literature.

COU 886 - Multivariate Research Methods
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: EDU 886
Discussion and critique of multivariate research methods, designs, and strategies as applied in contemporary educational research. Practical applications in multivariate research design, implementation, and interpretation of data.

COU 910 - Doctoral Research Seminar
School of Education
0-3 credit(s) At least 1x fall or spring
Issues related to identifying research questions, research design, implementation, dissemination, and review. Specific topics to be discussed are determined jointly by faculty and students to ensure relevance to research development needs of participants. May not be repeated for credit.
Repeatable 2 time(s), 9 credits maximum

COU 950 - Doctoral Internship
School of Education
0-6 credit(s) Every semester
Students must be engaged in internship experiences involving counseling, clinical supervision, and teaching over the course of their doctoral study. Individual and group supervision are required as part of internship.
Repeatable 3 time(s), 12 credits maximum

Disability Studies

DSP 600 - Selected Topics: Disability Studies Program
School of Education
1-6 credit(s)
Repeatable

DSP 614 - Critical Issues in Dis/Ability and Inclusion
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: CFE 614
Social construction of disability and special education. Disability autobiographies, research literature, parent narratives, legal/policy issues, shifting notions and cultural context of disability, and school and community inclusion. Review of disability classifications as they relate to these issues.

DSP 621 - Sociology of Disability
School of Education
3 credit(s) Irregularly
Crosslisted with: SPE 621
Sociological perspectives on disability treatment approaches, and social policy toward the disabled. Personal and public forms of stereotyping, prejudices, and discrimination.

DSP 632 - Disability, Technology, and New Media
School of Education
3 credit(s) At least 1x fall or spring
Trends and issues in Internet technologies and new media that affect people with disabilities. Constructions of ability/disability in mediated contexts.

DSP 644 - Significant Disabilities: Shifts in Paradigms and Practices
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: SPE 644
Curriculum development, methods, materials, and instructional strategies, emphasizing inclusive settings. Discrimination encountered; history and experiences (e.g., eugenics, racial stereotypes, gender roles, and ideas of progress); perspective of those with significant disabilities.

DSP 652 - Assistive Technologies for Integrating Students with Special Needs
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: IDE 652, SPE 652
Development of integrative technologies and strategies that can be functional in both educational and work environment. Support and adaptation for individuals with physical, educational, and language challenges.

DSP 657 - Deafness and Disability
School of Education
3 credit(s) Only during the summer
Double Numbered with: DSP 357
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 669 - Disability and Global Health
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: HTW 669
Major theories, historical events, laws, and research related to health and wellness worldwide among those living with disabilities.

DSP 688 - Social Policy and Disability
School of Education
3 credit(s) Irregularly
Crosslisted with: CFE 688, SPE 688

Trends and issues in the field and forces within society (political, economic, cultural, historical, and social) that affect people with disabilities.

**DSP 723 - Psychological, Social, and Cultural Aspects of Disability**
*School of Education*

3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: COU 723

Survey of the psychological, social, and cultural dimensions of disability with a focus on implications of social construction of disability for the adjustment of persons with disabilities in educational, rehabilitation, and community settings.

**DSP 724 - Representation of Ability and Disability**
*School of Education*

3 credit(s) Irregularly
Crosslisted with: CFE 723

Constructions, meanings, and markers of ability/disability. How representation relates to educational research and practice.

**DSP 775 - Gender, Sexuality, and Disability**
*School of Education*

3 credit(s) Irregularly
Crosslisted with: CFE 775

Interdisciplinary course, explores points of contact and conflict between feminist theory and disability studies. Embodiment, representation, and voice explored from a variety of disciplines and genres.

**DSP 776 - Gender, Education & Culture**
*School of Education*

3 credit(s) Irregularly
Crosslisted with: CFE 776, WGS 776

How gender is culturally constructed in American society with particular reference to education broadly conceived; how race and social class influence gender analysis.

**DSP 900 - 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 930 - Sociology and Anthropology of Education: Seminar in Special Topics**
*School of Education*

3 credit(s) Irregularly
Crosslisted with: CFE 930

Dialogue between students of education and those of sociology, anthropology, and related fields on issues of mutual interest. Evaluation of potential contributions of various fields to the solution or clarification of these issues.

Repeatable

**Education Leadership**

**EDA 600 - 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

**EDA 634 - Collaboration/Cooperation in Schools**
*School of Education*

3 credit(s) At least 1x fall or spring
Crosslisted with: SPE 634

Formal specialized services and informal support networks that promote collaboration between teachers, administrators, therapists, paraprofessionals, students, families, and community members.

**EDA 641 - Techniques in Educational Evaluation**
*School of Education*

3 credit(s) At least 1x fall or spring
Crosslisted with: IDE 641

Applied, programmatic techniques for evaluating educational/training programs and projects. Units focus on planning, client relations, problem analysis, data collection and analysis, reporting, evaluation management, and ethics.

**EDA 670 - Experience Credit**
*School of Education*

1-6 credit(s)

Repeatable

**EDA 700 - 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

**EDA 712 - Leadership for Diverse Learners and Communities**
*School of Education*

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

Conceptual overview of leadership in education and other contexts. Tacit conceptions and current approaches in light of theoretical and research bases for practice. Educational Leadership core. Introduction to the roles and challenges of leaders in public education. Themes include integration of theory and practice, serving diverse student populations, and developing school visions, collaborative cultures, and ethical platforms. Permission of instructor.

**EDA 722 - Curriculum and instructional leadership for Equity and Excellence**
*School of Education*

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

Explores issues and trends affecting curriculum and instructional practices in American schools, and the roles and skills of school leaders in promoting culturally responsive pedagogy, equity and high levels of achievement for all learners.

PREREQ: EDA 712

**EDA 725 - Current Research on Teaching**
*School of Education*

3 credit(s) Irregularly
Crosslisted with: EDU 725

Political, historical, and methodological aspects of elementary and secondary schools. Skills in analysis, synthesis, and criticism developed.

**EDA 727 - Curriculum Studies**
*School of Education*

3 credit(s) Irregularly
Crosslisted with: EDU 727


**EDA 732 - Ldrshp for Adult Develop**
*School of Education*

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

Roles of educational leaders in the professional development and supervision of adults in school systems, pre-kindergarten through 12th grade. Educational Leadership core.

PREREQ: EDA 712

**EDA 735 - Human Resource Management in Public Education**
*School of Education*

3 credit(s) Irregularly

Strategic implications, technical functions, and emerging issues in human resources management, including collective bargaining, in public education. Impact of human resource management policies and practices on educational quality.

**EDA 741 - Concepts and Issues in Educational Evaluation**
*School of Education*

3 credit(s) Irregularly

Introduction to the roles and challenges of leaders in public education. Themes include integration of theory and practice, serving diverse student populations, and developing school visions, collaborative cultures, and ethical platforms. Permission of instructor.
3 credit(s) At least 1x fall or spring
Crosslisted with: IDE 743
Planning, evaluation, program cost analysis, and decision making in education and training contexts. Defining and determining program effectiveness, linking cost and effectiveness, and case studies.

EDA 748 - Theory and Practice in Mentoring Teachers
School of Education
3 credit(s) Irregularly
Crosslisted with: EDU 748
Concepts and practices in mentoring among teachers. Induction programs at the state and local levels. Programs as part of professional development. Qualities and skills of mentors.

EDA 752 - Leadership for Organizational and Institutional Development
School of Education
3 credit(s) At least 1x fall or spring
Roles of educational leaders in developing structures and processes promoting learning. Theoretical and research bases of educational organization practices. Educational Leadership core. Addresses the roles of school leaders in developing, maintaining, and improving school structures and processes that support the continuous learning of all children and adults, including relationships with families and schools' various external constituencies.

EDA 761 - Strategies in Educational Project Management
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: IDE 761
Management tactics, skills, procedures, and tools for planning and administering educational projects. Includes planning, implementing, maintaining, and closing projects; investigating project management issues on scope, changes, and quality.

EDA 762 - Leadership for Inclusive Schooling
School of Education
3 credit(s) At least 1x fall or spring
Addresses the roles of school leaders in developing and managing systems that provide effective and inclusive education to students with diverse needs, including students with disabilities, English language learners, and students facing other learning challenges.

EDA 764 - Planned Change and Innovation
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: IDE 764
Social change in education, models of the change process, diffusion and implementation strategies. Case study analyses in schools and higher education and other organizational settings.

EDA 772 - Issues and Practices in Building Leadership
School of Education
3 credit(s) At least 1x fall or spring
Exploration of the functions of school principals, focusing on how they can balance different roles and promote high expectations and respect for all students, collaboration among staff and families, and effective management of resources.

EDA 780 - Workshop in Educational Administration
School of Education
1-3 credit(s) Irregularly
Repeatable

EDA 782 - Issues and Practices in District Leadership
School of Education
3 credit(s) At least 1x fall or spring
Exploration of the roles of school superintendents and other district leaders, focusing on how they oversee various technical functions, mediate relationships with external authorities and constituencies, and provide needed support for teaching and learning.

EDA 792 - Legal Basis of Education
School of Education
3 credit(s) At least 1x fall or spring
School law as set forth in the common law, state and federal constitutions, statutes, judicial decisions, and the rules and regulations of state departments and local units of administration.

EDA 800 - Selected Topics
School of Education
1-3 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.

EDA 822 - Assessment of Teaching
School of Education
3 credit(s) Irregularly
Crosslisted with: EDU 822
Issues and concepts in assessment of teaching and teachers. Skill and experience developed from political, psychological, and sociological perspectives.

EDA 890 - Seminar in Educational Administration
School of Education
3 credit(s) Irregularly
Theory in educational administration or case studies in educational administration, as announced for a given semester. Enrollment limited to students with previous training in administration.

EDA 898 - Internship in School District Business Leadership
School of Education
1-4 credit(s) At least 1x fall or spring
Provides candidates for School Business Leader certification with practical experience working in the business office of a school district under the supervision of a school business official. Student must have completed nine School District Business Leadership courses.

EDA 899 - Internship in Educational Administration and Supervision
School of Education
3-4 credit(s) Every semester
Practical administrative experience in an actual school situation under direction of an administrator and a professor of educational administration.

School of Education
EDA 970 - Experience Credit
School of Education
1-6 credit(s)
Repeatable

Education (General)

EDU 508 - Student Teaching
School of Education
2-15 credit(s) Every semester
Supervised teaching experience in pre-kindergarten 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 1x 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.

EDU 600 - 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 601 - Methods and Practice in Teaching Art
School of Education
4 credit(s) Every semester
Double Numbered with: EDU 301
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.

EDU 602 - Methods and Curriculum in Teaching Art
School of Education
4 credit(s) Every semester
Double Numbered with: EDU 302
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.

EDU 603 - Introduction to Qualitative Research
School of Education
3 credit(s) Every semester
Crosslisted with: SOC 614, WGS 614
Developing and using qualitative methods used by sociologists to conduct research. Underlying assumptions and limitations.

EDU 604 - World Music and the Interdisciplinary Curriculum
School of Education
3 credit(s) Irregularly
Crosslisted with: MUE 604
Examination of historical and social perspectives of world music in diverse cultural contexts. Strategies for teachers to develop and facilitate interdisciplinary curricula through examination of materials and resources featuring music from around the world.

EDU 606 - Understanding Learning and Teaching
School of Education
4 credit(s) Only during the summer
Explore personal and professional constructs related to learning and teaching diverse students; understand theory construction; develop an emerging practical theory. Consider the contexts of schools and communities. Includes field placement. May not also receive credit for EDU 605, 607; EED 604 or 606.

EDU 607 - The American School
School of Education
3 credit(s) Every semester
Double Numbered with: EDU 301
Issues that impinge on teachers, teaching, and schools in today's society. May not be repeated for credit.

EDU 610 - The American School
School of Education
3 credit(s) Every semester
Double Numbered with: EDU 310
Issues that impinge on teachers, teaching, and schools in today's society. May not be repeated for credit.

EDU 611 - Assessment in Music Education
School of Education
1 credit(s) At least 1x fall or spring
Crosslisted with: MUE 611
Examines a diverse selection of assessment methods for student learning within music education settings. Strategies for future instruction planning; instructional adaptations based on data gathered through teacher-created assessment tools.

EDU 616 - Understanding Educational Research
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: HED 616
For master's degree and beginning doctoral students who have had little, if any, exposure to research methods. Quantitative and qualitative methods are studied in the context of education.

EDU 621 - Behavior Techniques in Music Education
School of Education
3 credit(s) At least 1x fall or spring
Double Numbered with: EDU 421
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 622 - International Education for Transformation
School of Education
3 credit(s) At least 1x fall or spring
Double Numbered with: EDU 321
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 647 - Statistical Thinking and Applications
School of Education
3 credit(s) Every semester
The fundamental concepts, basic techniques, and logic of quantitative analysis in education and social science. Introductory inferential statistical methods covered include chi-square, t-test; basic ANOVA, correlation and multiple correlation.

EDU 655 - Education Tests and Measurements
School of Education
3 credit(s) Irregularly
Basic theory under-lying construction, evaluation, and use of educational tests. Construction and evaluation of achievement tests. Guided practice in test construction and test score analysis.
EDU 660 - Field Workshop  
School of Education  
3-6 credit(s) Upon sufficient interest  
For elementary- and secondary-school administrators and teachers to work in their own schools toward improvement of their programs. Staff members available to give continual or periodic direction and consultation. Further information may be obtained from the Extended Campus Office, Syracuse University, Huntington Hall, Syracuse NY 13244.  
Repeatable  

EDU 664 - Creating Safe and Peaceful Schools  
School of Education  
3 credit(s) Irregularly  
Focus on building caring, secure, and nurturing learning communities and creating classroom and school climates that encourage student focus, productivity, and cooperation. Positive approaches for supporting individual students and helping them to manage conflict (e.g., self-determination, peer mediation).  

EDU 700 - Special Topics in Education  
School of Education  
1-6 credit(s) Irregularly  
Special topics of current interest in the field of professional education for depth study by graduate students.  
Repeatable  

EDU 725 - Current Research on Teaching  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: EDA 725  
Political, historical, and methodological aspects of elementary and secondary schools. Skills in analysis, synthesis, and criticism developed.  

EDU 727 - Curriculum Studies  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: EDA 727  

EDU 737 - Quantitative Research Design  
School of Education  
3 credit(s) Even Academic Yr e.g. 2004-5  
Seminar addresses key issues, strengths, and limitations of various quantitative research designs, and integrates design with theory, sampling, measurement, and statistical analysis, using examples from the research literature in students' program areas.  
PREREQ: EDU 647  

EDU 748 - Theory and Practice in Mentoring Teachers  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: EDA 748  
Concepts and practices in mentoring among teachers. Induction programs at the state and local levels. Programs as part of professional development. Qualities and skills of mentors.  

EDU 760 - Workshop in Education  
School of Education  
1-6 credit(s) Upon sufficient interest  
For teachers, administrators, and other school personnel to work on campus toward solution of specific problems in elementary and secondary education in their schools. Each workshop has a core or central theme. Parallel to EDU 660.  
Repeatable  

EDU 778 - Narrative Inquiry in Research and Creative Practice  
School of Education  
3 credit(s) At least 1x fall or spring  
An exploration of the use of narrative methods in research and creative practice. Conducted in the form of a creative workshop, participants will learn to decode stories as data, and construct experiential data as stories.  

EDU 781 - The Institutions and Processes of Education I  
School of Education  
3 credit(s) At least 1x fall or spring  
A comprehensive study of learning and learners, the institutions of education, the public's interest in education from the perspectives of political economy, sociology, psychology, history, and philosophy. Uses of data in judgment.  

EDU 791 - Advanced Seminar in Quantitative Research Methods I  
School of Education  
3 credit(s) At least 1x fall or spring  
Reviews, integrates and extends concepts and techniques from introductory statistics and research design. Focuses on intermediate-level statistical techniques including ANOVA, multiple regression, discriminant analysis, and path analysis. Training in SPSS using extant data sets. Student must have completed a graduate course in statistics.  
PREREQ: EDU 647  

EDU 800 - 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 810 - Advanced Seminar in Qualitative Research I  
School of Education  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SOC 811, WGS 812  
Expand fieldwork skills and increase theoretical understanding: emphasis on "thinking qualitatively;" intensive fieldwork.  
PREREQ: EDU 603/SOC 614  

EDU 815 - Advanced Seminar in Qualitative Research II  
School of Education  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SOC 812  
Applications to issues of special education and related educational or human service settings.  
PREREQ: EDU 810 OR SOC 811 OR WGS 812  

EDU 820 - Program Development in Teacher Education  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: EDA 820  
Theoretical models, experimental programs. Historical perspective on recent innovative movements. Development in local pre-service/in-service program.  

EDU 822 - Assessment of Teaching  
School of Education  
3 credit(s) Irregularly  
Crosslisted with: EDA 822  
Issues and concepts in assessment of teaching and teachers. Skill and experience developed from political, psychological, and sociological perspectives.  

EDU 824 - Practices, Problems, and Prospects in the Field of Teacher Education  
School of Education  
3 credit(s) Irregularly  

EDU 833 - Critical Curriculum Theory  
School of Education  
3 credit(s) Upon sufficient interest  
Radical traditions in curriculum theory in the Americas and Europe. Critical, radical, and progressive approaches concerned with issues of power, language access, justice, and equity. Critical theorists, feminists, multiculturalists, culturally
relevant pedagogues, and post-structuralists.

EDU 835 - Learning Theories in Education
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: MTD 835
Examination of cognitive science, constructivism, social cognition, and other learning theories and their influence on how educators view learning and have conducted research about learning.

EDU 841 - The Nature and Design of Inquiry
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: IDE 841
Overview of social, academic, and psychological aspects, including fundamental mental abilities of inquiry. Introduction to full range of quantitative and qualitative inquiry strategies and practice in research topic identification, problem formation, and study design.

EDU 886 - Multivariate Research Methods
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: COU 886
Discussion and critique of multivariate research methods, designs, and strategies as applied in contemporary educational research. Practical applications in multivariate research design, implementation, and interpretation of data.

EDU 910 - Current Scholarship in Teaching and Leadership
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Seminar in current scholarly work of teaching and leadership faculty. Topics, interests, research. Methods and approaches. Forms of publication and exhibition. Matriculation at doctoral level. Repeatable 1 time(s), 6 credits maximum

EDU 915 - Teaching and Leadership for Social Justice
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Doctoral seminar exploring the writing of classic and contemporary educators who have had significant impact on the development of educational thinking, policies, and practices that promote democratic schooling and social justice.

EDU 970 - 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

EDU 990 - 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 991 - Problems in Educational Research
School of Education
1-6 credit(s) Upon sufficient interest
For qualified students who wish to pursue individual problems under faculty direction, particularly problems in those fields not served by a special research course. Repeatable

EDU 997 - Thesis
School of Education
1-6 credit(s) Every semester
Repeatable

EDU 999 - Dissertation
School of Education
1-15 credit(s) Every semester
Repeatable 7 time(s), 8 credits maximum

Additional work required of graduate students.

EDU 636 - Assessing Mathematical Understanding
School of Education
3 credit(s) Irregularly
Crosslisted with: MTD 636, SED 636

EDU 640 - Participation in the Professional Development School
School of Education
0-1 credit(s) Every semester
Crosslisted 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

EDU 643 - The Parent/Caregiver-Professional Partnership
School of Education
3 credit(s) Only during the summer
Approaches to developing strong relationships with parents and caregivers to enhance the young child’s development and strengthen the parent-child bond. Brazelton Touchpoints® Approach and other skills for collaborating with families regarding typical and atypical development.

EDU 654 - Teaching Mathematics, Science and Social Studies in Early Childhood
School of Education
3 credit(s) Only during the summer
Basic concepts and strategies for teaching mathematics, science, and social studies to preschool and primary age (K-2) children.

English Language Learners

ELL 615 - Linguistics for Teachers of English Language Learners
School of Education
3 credit(s) At least 1x fall or spring
Classroom-oriented applications of linguistic concepts for effective teaching of English language learners, including: Phonology, morphology, syntax, semantics, pragmatics. Sociolinguistic, psycholinguistic, and cognitive-science principles included pertaining to teaching and learning of second languages.
ELL 625 - Methods of Teaching Literacy to English Language Learners
School of Education
3 credit(s) At least 1x fall or spring
Planning and executing activities for standards-based classroom instruction and assessment that integrates English language skills, developing classroom resources and standards-based assessment measures for students learning English as another language, includes 25-hour field experience.

ELL 635 - Methods of Literacy Across the Curriculum for English Language Learners
School of Education
3 credit(s) At least 1x fall or spring
Developing strategies, techniques and materials for teaching speaking, reading, writing, and communication skills in English to speakers of other languages through content areas, planning for, managing and implementing standards-based content instruction for English language learners’ understanding of content area, includes 25-hour field experience.

ELL 645 - Issues in Educating English Language Learners
School of Education
3 credit(s) At least 1x fall or spring
Integration and synthesis of the concepts, principles, trends in research methods and issues in language and literacy education for English language learners; to include research, practice, and policy concerns.

ELL 655 - Teaching English Language Learners Practicum and Capstone Seminar
School of Education
6 credit(s) Only during the summer
Supervised field placement in two separate settings, Pre K-6 and Grades 7-12 classrooms, during which students provide instruction to English language learners and assume other roles of an ESL teacher. This course can be taken only after successful completion of all other courses in the program.

Health and Physical Education

HEA 685 - Worksite Health Promotion
School of Education
3 credit(s) Irregularly
Double Numbered with: HEA 485
Principles and applications of health promotion in the workplace.

Higher Education

HED 600 - 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

HED 601 - Graduate Interest Group Seminar
School of Education
0 credit(s) At least 1x fall or spring
Linking seminar for the learning community in the Higher Education master’s program. Provides orientation to graduate school and the department, socialization with peers and faculty, and integration of coursework.

HED 605 - The American College and University
School of Education
3 credit(s) At least 1x fall or spring
Contemporary American higher education - objectives, institutions, faculties, curriculum, organization and administration, relations with society; major historical influences and current practices. Basic course for students planning further study in higher education.

HED 611 - Laboratory in Learning Communities
School of Education
3 credit(s) At least 1x fall or spring
Hands-on experience that requires students to examine the purpose, research, and diverse organizational structures of interdisciplinary learning communities at local, regional, and national levels.

HED 616 - Understanding Educational Research
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: EDU 616
For master’s degree and beginning doctoral students who have had little, if any, exposure to research methods. Quantitative and qualitative methods are studied in the context of education.

HED 621 - Principles and Practices of Student Affairs Administration
School of Education
3 credit(s) At least 1x fall or spring
Historical, developmental, and philosophical bases of Student Affairs administration. Organization, development, administration of college and university programs that fall under the jurisdiction of student affairs. Roles and responsibilities of student affairs officers.

HED 664 - Administrative Principles and Practices for Higher Education
School of Education
3 credit(s) At least 1x fall or spring
Theories of leadership; models of personnel selection, motivation, and evaluation; staff problems, job stress, and burnout.

HED 700 - 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

HED 712 - Research on the College Student
School of Education
3 credit(s) At least 1x fall or spring
Identifies issues research has addressed; helps students locate data sources and instruments for use in future studies. Theories of student development applicable to research on college students.

HED 715 - Public Policy and Higher Education
School of Education
3 credit(s) Irregularly
Effects of public policy on the functioning of institutions. Applies models of decision making processes to real and hypothetical issues.

HED 721 - College Student Development
School of Education
3 credit(s) At least 1x fall or spring
Principles and practices that inform the nature, purpose, development and implementation of co-academic outside the classroom learning experiences of college students. The educational role of student affairs officers.

HED 725 - Gender and Race in Higher Education
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: CFE 725, WGS 725
Examines the influence of gender and race in historical and contemporary higher education from interdisciplinary perspective; considers dynamics of power, privilege, and oppression; includes topics related to student and faculty experiences, and curricular issues.

HED 730 - Internship in Higher Education
School of Education
1-6 credit(s) Every semester
Supervised field experiences and related seminar.
For matriculated graduate students who are considering an administrative position in a higher education setting. Permission of instructor.
Repeatable 2 time(s), 9 credits maximum

HED 741 - The Academic Program
School of Education
3 credit(s) Irregularly
Historical and philosophical forces that shaped curriculum in higher education; current practices and policies of the curriculum; factors influencing development and implementation of academic programs.

HED 755 - Legal Issues in Higher Education
School of Education
3 credit(s) At least 1x fall or spring
Legal issues arising from the relationship between higher education institutions and their governing boards, administrators, faculty, students, and governmental bodies.

HED 761 - Organization and Administration in Higher Education
School of Education
3 credit(s) Irregularly
Organizational structure of colleges and universities. Models of organizational functioning, adaptation, decline, governance, and culture. Leadership in colleges and universities.

HED 820 - Doctoral Seminar in Higher Education
School of Education
3 credit(s) Irregularly
Specific topic in the theory and/or practice of higher education. Course topics will vary.
Repeatable 1 time(s), 6 credits maximum

HED 831 - Advanced College Student Development
School of Education
3 credit(s) Irregularly
Builds upon students’ current knowledge and deepens their understanding of how college students develop and learn. Critically examines the inclusivity and applicability of various theoretical perspectives.

HED 849 - Seminar in College Instruction
School of Education
3-6 credit(s) Irregularly
Readings and discussions of teaching and learning theories, observations of exemplary college instructors, design of courses and syllabi.

Instructional Design, Development, and Evaluation

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.

IDE 600 - 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

IDE 611 - Technologies for Instructional Settings
School of Education
3 credit(s) At least 1x fall or spring
Students gain knowledge, skills and experiences with a variety of information and communication technologies relevant to educational contexts, create instructional materials and resources, and examine critical issues related to information technologies used in instructional settings. May not receive degree credit for both IDE 611 and IST/IDE 613.

IDE 621 - Principles of Instruction and Learning
School of Education
3 credit(s) At least 1x fall or spring
Theories of learning and instruction, factors affecting human learning, youth through adult, with implications for the design and management of instruction.

IDE 631 - Instructional Design and Development I
School of Education
3 credit(s) At least 1x fall or spring
Major aspects of instructional design and development emphasizing learning outcomes, instructional objective, and strategies in the context of theory and practice. Emphasis on knowledge and skills required to create instructional design rationale.

IDE 632 - Instructional Design and Development II
School of Education
3 credit(s) At least 1x fall or spring
Instructional design and development theory and practice. The knowledge and skills required to select, revise, and apply instructional development models.

IDE 641 - Techniques in Educational Evaluation
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: EDA 641
Applied, programmatic techniques for evaluating educational/training programs and projects. Units focus on planning, client relations, problem analysis, data collection and analysis, reporting, evaluation management, and ethics.

IDE 651 - Message Design for Digital Media
School of Education
3 credit(s) At least 1x fall or spring
Combines message design theory with basic technology skills development to create technology-based or enhanced instructional materials.

IDE 652 - Assistive Technologies for Integrating Students with Special Needs
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: DSP 652, SPE 652
Development of integrative technologies and strategies that can be functional in both educational and work environment. Support and adaptation for individuals with physical, educational, and language challenges.

IDE 656 - Computers as Critical Thinking Tools
School of Education
3 credit(s) Only during the summer
Double Numbered with: IDE 456
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.
PREREQ: IDE 621 AND IDE 631

IDE 660 - Topics in Program Management and Human Performance Technology
School of Education
3 credit(s) Upon sufficient interest
As the discipline related to project management, performance engineering, and human performance technology continues to evolve, ongoing consideration of new theories, maturing conceptual models, and clarified procedures will be required.

IDE 680 - Internship and Fieldwork in Educational Technology
School of Education
1-9 credit(s) Upon sufficient interest
Designed to provide students with practical
IDE 712 - Analysis for Human Performance Technology Decisions
School of Education
3 credit(s) At least 1x fall or spring
Addresses analytical techniques used to determine educational or training program solutions. Participants examine human behavior and the role that instruction can have in changing behavior on the job and in society.

IDE 735 - Modeling and Simulations in Education
School of Education
3 credit(s) Only during the summer
Modeling and simulations for instructional purposes; analysis of appropriate kinds of modeling and simulation activities to support different learning outcomes. Demonstration and discussion of modeling and simulation tools.

IDE 736 - Motivation in Learning and Instruction
School of Education
3 credit(s) Only during the summer
Theories of motivation relevant to the design, development, implementation, and evaluation of instructional systems. Learning and performance environments are reviewed, analyzed, and applied. Methods to make instructional processes personally relevant and meaningful.

IDE 737 - Advanced Instructional Design
School of Education
3 credit(s) Only during the summer
Capstone course. Additional learning experience helping students develop confidence in their role as designers. Students will storyboard, critique, enhance, and evaluate an instructional unit while learning about advanced design techniques.

IDE 741 - Concepts and Issues in Educational Evaluation
School of Education
3 credit(s) At least 1x fall or spring
Crosstlisted with: EDA 741
Major theoretical approaches to evaluation of educational products, personnel, projects, programs and policies are reviewed, analyzed, and critiqued. Pragmatic implications for educational and social policy, as well as evaluation practice are highlighted.

IDE 742 - Introduction to Survey Research
School of Education
3 credit(s) At least 1x fall or spring
Provides knowledge and skills in basic survey design, sampling, instrument construction, data collection, and ethics of questionnaire and interview surveying.

IDE 743 - Cost-Effectiveness in Instruction and Training
School of Education
3 credit(s) Irregularly
Crosstlisted with: EDA 743
Planning, evaluation, program cost analysis, and decision making in education and training contexts. Defining and determining program effectiveness, linking cost and effectiveness, and case studies.

IDE 756 - Design of Online Courses
School of Education
3 credit(s) Irregularly
Double Numbered with: IDE 457
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 761 - Strategies in Educational Project Management
School of Education
3 credit(s) At least 1x fall or spring
Crosstlisted with: EDA 761
Management tactics, skills, procedures, and tools for planning and administering educational projects. Includes planning, implementing, maintaining, and closing projects; investigating project management issues on scope, changes, and quality.

IDE 762 - Performance Improvement: Promise and Practice
School of Education
3 credit(s) Only during the summer
Theories and techniques for solving training problems and designing training programs in business, industry, and other performance-oriented organizations. Specific issues and techniques for developing and implementing training programs.

IDE 764 - Planned Change and Innovation
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosstlisted with: EDA 764
Social change in education, models of the change process, diffusion and implementation strategies. Case study analyses in schools and higher education and other organizational settings.

IDE 771 - Methods and Techniques for Teaching and Training Adults
School of Education

IDE 681 - Instructional Technology K-12 Practicum and Seminar I
School of Education
1 credit(s) At least 1x fall or spring
First of three 1-credit courses. Students examine placement site, assess technology uses, explore technology topics, troubleshoot, identify training opportunities. Must complete in sequence IDE681FA, IDE 682SP IDE 683SU within same academic year.

IDE 682 - Instructional Technology K-12 Practicum and Seminar II
School of Education
1 credit(s) At least 1x fall or spring
Second of three 1-credit courses. Students continue to examine placement site, explore technology practices topics, design/develop/ implement/evaluate educational technology professional development or student training session. Must complete in sequence IDE681FA, IDE682SP IDE 683SU within same academic year.

IDE 683 - Instructional Technology K-12 Practicum and Seminar III
School of Education
1 credit(s) Only during the summer
Third 1-credit practicum course. Students summarize/reflect on placement experiences, summarize educational technology instructional intervention, self-critique their competencies as Educational Technology Specialists, prepare final portfolios. Must complete in sequence IDE681FA, IDE682SP IDE 683SU within same academic year.

IDE 690 - Independent Study
School of Education
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.

IDE 700 - 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.

IDE 680 - Independent Study
School of Education
1-6 credit(s) Only during the summer
Provides knowledge and skills in basic survey design, sampling, instrument construction, data collection, and ethics of questionnaire and interview surveying.

IDE 681 - Instructional Technology K-12 Practicum and Seminar I
School of Education
1 credit(s) At least 1x fall or spring
First of three 1-credit courses. Students examine placement site, assess technology uses, explore technology topics, troubleshoot, identify training opportunities. Must complete in sequence IDE681FA, IDE 682SP IDE 683SU within same academic year.

IDE 682 - Instructional Technology K-12 Practicum and Seminar II
School of Education
1 credit(s) At least 1x fall or spring
Second of three 1-credit courses. Students continue to examine placement site, explore technology practices topics, design/develop/ implement/evaluate educational technology professional development or student training session. Must complete in sequence IDE681FA, IDE682SP IDE 683SU within same academic year.

IDE 683 - Instructional Technology K-12 Practicum and Seminar III
School of Education
1 credit(s) Only during the summer
Third 1-credit practicum course. Students summarize/reflect on placement experiences, summarize educational technology instructional intervention, self-critique their competencies as Educational Technology Specialists, prepare final portfolios. Must complete in sequence IDE681FA, IDE682SP IDE 683SU within same academic year.

IDE 690 - Independent Study
School of Education
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.

IDE 700 - 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.

IDE 712 - Analysis for Human Performance Technology Decisions
School of Education
3 credit(s) At least 1x fall or spring
Addresses analytical techniques used to determine educational or training program solutions. Participants examine human behavior and the role that instruction can have in changing behavior on the job and in society.

IDE 735 - Modeling and Simulations in Education
School of Education
3 credit(s) Only during the summer
Modeling and simulations for instructional purposes; analysis of appropriate kinds of modeling and simulation activities to support different learning outcomes. Demonstration and discussion of modeling and simulation tools.

IDE 736 - Motivation in Learning and Instruction
School of Education
3 credit(s) Only during the summer
Theories of motivation relevant to the design, development, implementation, and evaluation of instructional systems. Learning and performance environments are reviewed, analyzed, and applied. Methods to make instructional processes personally relevant and meaningful.

IDE 737 - Advanced Instructional Design
School of Education
3 credit(s) Only during the summer
Capstone course. Additional learning experience helping students develop confidence in their role as designers. Students will storyboard, critique, enhance, and evaluate an instructional unit while learning about advanced design techniques.

IDE 741 - Concepts and Issues in Educational Evaluation
School of Education
3 credit(s) At least 1x fall or spring
Crosstlisted with: EDA 741
Major theoretical approaches to evaluation of educational products, personnel, projects, programs and policies are reviewed, analyzed, and critiqued. Pragmatic implications for educational and social policy, as well as evaluation practice are highlighted.

IDE 742 - Introduction to Survey Research
School of Education
3 credit(s) At least 1x fall or spring
Provides knowledge and skills in basic survey design, sampling, instrument construction, data collection, and ethics of questionnaire and interview surveying.

IDE 743 - Cost-Effectiveness in Instruction and Training
School of Education
3 credit(s) Irregularly
Crosstlisted with: EDA 743
Planning, evaluation, program cost analysis, and decision making in education and training contexts. Defining and determining program effectiveness, linking cost and effectiveness, and case studies.

IDE 756 - Design of Online Courses
School of Education
3 credit(s) Irregularly
Double Numbered with: IDE 457
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 761 - Strategies in Educational Project Management
School of Education
3 credit(s) At least 1x fall or spring
Crosstlisted with: EDA 761
Management tactics, skills, procedures, and tools for planning and administering educational projects. Includes planning, implementing, maintaining, and closing projects; investigating project management issues on scope, changes, and quality.

IDE 762 - Performance Improvement: Promise and Practice
School of Education
3 credit(s) Only during the summer
Theories and techniques for solving training problems and designing training programs in business, industry, and other performance-oriented organizations. Specific issues and techniques for developing and implementing training programs.

IDE 764 - Planned Change and Innovation
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosstlisted with: EDA 764
Social change in education, models of the change process, diffusion and implementation strategies. Case study analyses in schools and higher education and other organizational settings.

IDE 771 - Methods and Techniques for Teaching and Training Adults
School of Education
IDE 772 - Educational Technology in International Settings
School of Education
3 credit(s) Only during the summer
Issues arising in application of instructional principles, strategies, and processes in international settings. Impact of educational technology reforms around the world; issues and challenges in designing multicultural learning; social aspects of instructional design, development, evaluation.

IDE 800 - 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

IDE 830 - Doctoral Seminar in Design and Development
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
As new technologies emerge, new instructional design research and practice issues arise. Advanced seminar investigating and discussing models and research topics in the area of instructional design and development.
PREREQ: IDE 621 AND IDE 631 AND IDE 632 AND IDE 641 AND IDE 712
Repeatable

IDE 831 - Knowledge Management in Instructional Design
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
PREREQ: IDE 712 AND IDE 651 AND IDE 632
Repeatable

IDE 841 - The Nature and Design of Inquiry
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: EDU 841
Overview of social, academic, and psychological aspects, including fundamental mental abilities of inquiry. Introduction to full range of quantitative and qualitative inquiry strategies and practice in research topic identification, problem formation, and study design.

IDE 843 - Dissertation Research Seminar
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Advanced discussion of problem formation, literature review, study design, and professional context of instructional research; support in preparation of dissertation research proposal.

IDE 850 - Doctoral Seminar in Conducting Literature Reviews
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Develop advanced knowledge in student’s field of study through the process of learning how to conduct a literature review; learn how to successfully communicate and defend understanding of study area.
PREREQ: IDE 621 AND IDE 631 AND IDE 632
Repeatable 1 time(s), 6 credits maximum

IDE 853 - Educational Media Theory and Research
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Media-research programs, trends, and findings. Current theoretical and conceptual approaches in media and related research. Optional modules in reviews of related literature in specific media-research areas.

IDE 980 - Internship and Fieldwork in Instructional Technology
School of Education
1-9 credit(s) Every semester
Practical experience in administration of instructional technology programs. Cooperative work under the direction of a supervisor and faculty advisor. Involvement in all aspects of the school's instructional-technology program.
Repeatable

IDE 990 - 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

Media & Education

M&E 601 - Media and Education CAS Colloquium
School of Education
1 credit(s) Only during the summer
Critical examination of intersections between the fields of Media and Education for educational professionals.

M&E 610 - Media and Education Master's Colloquium
School of Education
1 credit(s) Every semester
Critical examination of intersections between the fields of Media and Education at three distinct phases in students’ programs of study.
Repeatable 2 time(s), 3 credits maximum

M&E 611 - Proseminar in Media and Education
School of Education
3 credit(s) Every semester
Critical examination of the intersections of law, ethics and professionalism in the increasingly confluent fields of media and education.

M&E 621 - Media and Education Practicum: Project Development
School of Education
3 credit(s) At least 1x fall or spring
Conceiving, structuring and planning media projects in students’ respective fields of educational practice. Students will participate in an interactive forum designed to foster discussion about creative and educational challenges arising from their work.

M&E 622 - Media and Education Practicum: Production
School of Education
3 credit(s) At least 1x fall or spring
Production and post production of media projects in students’ respective fields of educational practice. Students will participate in an interactive forum designed to foster discussion about creative and educational challenges arising from their work.

M&E 650 - Special Projects Seminar
School of Education
2 credit(s) At least 1x fall or spring
This flexible course format is designed to accommodate Media and Education project-based initiatives in a variety of educational areas of study.

M&E 689 - Media & Education Capstone
School of Education
3 credit(s) At least 1x fall or spring
This advanced practice course is designed to provide M&E students the opportunity to cap their Master’s experience with a summative media and education project of their own design.

M&E 690 - Independent Study
School of Education
1 credit(s) Only during the summer
School of Education

Mathematics Education

MTD 600 - Selected Topics
School of Education
1-6 credit(s) Upon sufficient interest
Repeatable
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

MTD 630 - Internship in Mathematics Education
School of Education
1-3 credit(s) Every semester
Graduate students work with mathematics education faculty in teaching courses, developing curricula, assessing student understanding, understanding student beliefs.

MTD 631 - Teaching Number Ideas, K-6
School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: EED 631
Double Numbered with: MTD 431
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 632 - Teaching Geometry and Measurement, K-6
School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: EED 632
Double Numbered with: MTD 432
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 633 - Teaching Geometry and Measurement
School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: EED 633
Double Numbered with: MTD 433
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 634 - Teaching and Learning Functions
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: SED 634
Double Numbered with: MTD 434
Functions as an organizing theme for mathematics education, 5-14. Theoretical development of the function concept and multiple representations.

MTD 635 - Mathematical Communication
School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: EED 635
Double Numbered with: MTD 435
Theoretical development of the role of communication in students' mathematical learning, K-12. Examination of strategies to support all students' abilities to read mathematical texts, to generate written responses, and to engage in productive classroom conversations.

MTD 636 - Assessing Mathematical Understanding
School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: EED 636, SED 636

MTD 637 - Teaching and Learning Geometry
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: SED 637
Double Numbered with: MTD 437
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 638 - Teaching and Learning Statistics
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: SED 638
Double Numbered with: MTD 438

MTD 736 - Mathematical Communication
School of Education
3 credit(s) Irregularly
Crosslisted with: RED 736
Theoretical development of the role of communication in students' mathematical learning, K-12. Examination of strategies to support all students' abilities to read mathematical texts, to generate written responses, and to engage in productive classroom conversations.

MTD 800 - 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

MTD 830 - Research Seminar in Mathematics Education
School of Education
0-3 credit(s) Every semester
Philosophical and theoretical readings and discussions about research issues in mathematics education.
Repeatable 5 time(s), 6 credits maximum

MTD 835 - Learning Theories in Education
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: EDU 835
Examination of cognitive science, constructivism, social cognition, and other learning theories and their influence on how educators view learning and have conducted research about learning.

Professional Physical Education

PPE 514 - Exercise and Aging
School of Education
3 credit(s) At least 1x 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.
School of Education

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

PPE 600 - 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 606 - Current Literature in Exercise and Sport Science
School of Education
1-3 credit(s) At least 1x fall or spring
Current books, periodicals, and peer-reviewed articles. Literature review, library research, and research proposal preparation.

PPE 683 - Scientific Principles of Conditioning
School of Education
3-6 credit(s) Irregularly
Double Numbered with: PPE 483
Development of physical conditioning programs based on scientific principles.

PPE 685 - Systemic Physiology and Exercise
School of Education
3 credit(s) At least 1x fall or spring
Immediate and chronic effects of exercise on the cardiovascular, respiratory, excretory, endocrine, and nervous systems. Laboratory experiences.

PPE 693 - Research Methods in Exercise and Sport Science
School of Education
3 credit(s) At least 1x fall or spring
Quantitative research designs and analyses in exercise and sport sciences. Written and oral research report preparation and presentation.
PREREQ: PPE 606 AND EDU 647

PPE 753 - Cardiovascular Physiology
School of Education
3 credit(s) Irregularly
The principles of cardiac function, blood flow, oxygen transport, and metabolism with emphasis given to the adaptations to acute and chronic exercise training.
PREREQ: PPE 685

PPE 764 - Internship in Exercise Science
School of Education
3-6 credit(s) Every semester
Full-time experience in exercise science under the guidance of a professional and a faculty member.
Repeatable 2 time(s), 6 credits maximum

PPE 773 - Exercise Endocrinology
School of Education
3 credit(s) At least 1x fall or spring
Integrates endocrine physiology and exercise on the endocrine system. Focus on the glands producing hormones, the target organs, mechanisms, and how both acute and chronic exercise impact hormone action.
PREREQ: PPE 685

PPE 785 - Energy, Metabolism and Exercise
School of Education
3 credit(s) At least 1x fall or spring
Probable causes for differences in muscle-fiber types in relationship to exercise. Total body metabolism during exercise.

PPE 795 - Skeletal Muscle Physiology
School of Education
3 credit(s) At least 1x fall or spring
Emphasizing basic muscle microanatomy and physiology and advanced applied muscle physiology topics.
PREREQ: PPE 685

Reading and Language Arts

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.

RED 600 - Selected Topics
School of Education
1-6 credit(s)
Application of major concepts, principles, theories, and research related to the nature and role of culture to constructing learning environments that support students' cultural identities, language and literacy development, and content-area achievement.

RED 607 - Issues in Multicultural Literacy
School of Education
3 credit(s) At least 1x fall or spring
Theory, research-based concepts, instruction, materials, assessment, and programs for teaching comprehension. Integrated into the course are an emphasis on instructional coaching and using technology to promote comprehension development.

RED 613 - Teaching Comprehension
School of Education
3 credit(s) At least 1x fall or spring
Writing theory, research, and practice for youth in and beyond school contexts. Highlights spaces in urban schools and communities that encourage the creative writing practices of today’s youth. Includes 25 hours of fieldwork in community.

RED 614 - Teaching 21st Century Writers In and Out of School
School of Education
3 credit(s) At least 1x fall or spring
Provides opportunities for students to construct concepts, acquire skills, and explore issues related to teaching, assessing, and providing leadership around academic writing for a wide range of learners in K-12 classrooms.

RED 615 - Teaching Academic Writing in K-12 Classrooms
School of Education
3 credit(s) Every semester
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.

RED 616 - Academic Language and Reading
School of Education
3 credit(s) At least 1x fall or spring
Research-based concepts, instruction and materials, assessment, and programs for developing academic language and reading in grades five through twelve. For subject-area teachers, literacy specialists, and other educators interested in adolescent literacy.
RED 621 - Literacy Intervention for Special Educators, Grades K-12
School of Education
3 credit(s) Only during the summer
Current research, issues, and practices in literacy for special educators in grades K-12, with a particular focus on literacy intervention.
PREREQ: (EED 624 AND EED 625 ) OR RED 625

RED 625 - Literacy Across the Curriculum
School of Education
3-4 credit(s) Every semester
Double Numbered with: RED 326
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 626 - Early Intervention for Children's Reading Problems
School of Education
3 credit(s) Every semester
Crosslisted with: SPE 627
Research-based instruction for prevention and remediation of reading difficulties. Focus on preschool and early elementary children at risk for reading problems, as well as older elementary children labeled learning disabled, reading disabled, or dyslexic.

RED 629 - Data-Driven Early Literacy Intervention and Coaching
School of Education
3 credit(s) At least 1x fall or spring
Advanced research-based diagnostic assessment and intervention for learners with severe reading and writing disabilities. Includes 25+ hours of practice in diagnosis and treatment.
PREREQ: RED 626/SPE 627

RED 700 - 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 715 - Language, Learning, and Literacy
School of Education
3 credit(s) Irregularly
Seminar on relationships between oral and written language and learning; social influences on linguistic and cognitive development; socially interactive models of language learning and teaching.

RED 736 - Mathematical Communication
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: MTD 736
Theoretical development of the role of communication in students' mathematical learning, K-12. Examination of strategies to support all students' abilities to read mathematical texts, to generate written responses, and to engage in productive classroom conversations.

RED 745 - Perspectives on Literacy and Technology
School of Education
3 credit(s) At least 1x fall or spring
Exploration of the theoretical literature and research on the relationships between literacy and technology in various sociocultural contexts. Consideration of instructional frameworks, methods, and materials for technology-enhanced literacy instruction with diverse learners.

RED 747 - Literacy Clinic
School of Education
6 credit(s) Only during the summer
Supervised practice and seminar in diagnosing and tutoring students who struggle with reading and writing. Includes a 50-hour practicum
PREREQ: RED 629

Science Education
SCE 600 - 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

SCE 613 - Methods and Curriculum in Teaching Science
School of Education
3 credit(s) At least 1x fall or spring
Double Numbered with: SCE 413
Planning lessons, developing broad units, planning curricula for science 7-12. Prereq: Admission to secondary candidacy semester.
COREQ: SPE 612

SCE 614 - The Nature of Science in Science Education
School of Education
3 credit(s) Only during the summer
Historical, philosophical, psychological, and sociological aspects of science as they pertain to lesson planning, curriculum development, and instruction in 7-12 science classrooms. Literature reviews, guest seminars, and collaborative team projects. Completion of the secondary education candidacy semester, or permission of instructor.

SCE 616 - Assessment & Data-Driven Instruction
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted 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.

SCE 718 - Curriculum Problems in Science Education
School of Education
3 credit(s) Only during the summer
For elementary and junior and senior high school teachers who wish to work on problems from their own classrooms. Instruction primarily on an individual basis. Students may build new units of work, outline science courses and sequences, or enrich existing courses.

SCE 737 - Methods and Materials in Teaching the Physical Sciences
School of Education
3 credit(s) Irregularly
Teaching physical sciences in secondary schools. Demonstrations, laboratory techniques, and experiments. Audiovisual devices in physical sciences.

SCE 747 - Methods and Materials in Teaching the Biological Sciences
School of Education
3 credit(s) Irregularly
High school instruction in biological sciences. Demonstrations, laboratory experiences, teaching methods in various areas of high school biological science. Caring for living things in the classroom. Field trip development and audio-visual aids in biological sciences.

SCE 750 - Seminar in the Physical and Biological Sciences for Teachers
School of Education
1-3 credit(s) Irregularly
Recent advances in astronomy, chemistry, geology, plant sciences, physics, and zoology and their implications for teaching of science in elementary and secondary schools.
Repeatable
SCE 757 - Methods and Materials in Teaching the Earth Sciences
School of Education
3 credit(s) Irregularly
Secondary school instruction in earth sciences. Laboratory techniques, field methods, analysis of threedimensional problems. Interpretation of data. Special methods of the Earth Science Curriculum Project. Seminar, laboratory, field trips.
PREREQ: EAR 101 AND 102

SCE 767 - Methods and Materials in Teaching Junior High School (Middle School) Science
School of Education
4 credit(s) Irregularly
Structure and content of junior high school science curricula based on lectures, discussions, laboratory experiences, and field work consisting of observation and teaching the junior high curricula.

SCE 770 - Workshop in Science Education
School of Education
3-6 credit(s) Upon sufficient interest
For experienced science teachers who wish to study present day problems in science education and work on specific curriculum problems that exist in their schools.
Repeatable

SCE 779 - Seminar in Science Education Research
School of Education
3 credit(s) Irregularly
Scholarly literature in science education. Major problems in science education and their relevance to practice.

Secondary Education

SED 613 - Methods and Curriculum in Teaching
School of Education
3 credit(s) At least 1x fall or spring
Double Numbered with: SED 413
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 612

SED 616 - Assessment & Data-Driven Instruction
School of Education
3 credit(s) At least 1x fall or spring
Crosslisted with: SCE 616
Double Numbered with: SED 416
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 634 - Teaching and Learning Functions
School of Education
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: MTD 634
Double Numbered with: SED 434
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 636 - Assessing Mathematical Understanding
School of Education
3 credit(s) Upon sufficient interest
Crosslisted with: EED 636, MTD 636

SED 637 - Teaching and Learning Geometry
School of Education
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: MTD 637
Double Numbered with: SED 437
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.

SED 640 - Participation in the Professional Development School
School of Education
0-1 credit(s) Every semester
Crosslisted with: EED 640
Double Numbered with: SED 340
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

Special Education

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 1x fall or spring
Curricula, program design, and teaching methods for educating infants and young children with disabilities.

SPE 600 - 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 609 - Teaching Children and Adolescents with Autism
School of Education
3 credit(s) Irregularly
Cognitive, social, and communication needs of children and adolescents with autism. Examines program development, behavioral management, and effective educational strategies for this population of students.

SPE 612 - Adapting Instruction for Diverse Student Needs
School of Education
3 credit(s) Every semester
Double Numbered with: SPE 412
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 613 - Developmental Therapy for Children with Disabilities
School of Education
3 credit(s) At least 1x fall or spring
Integrated occupational/ physical therapy
interventions and curricular modifications for children with special needs, ages birth to 5 years, in collaboration with early childhood special education planning.

**SPE 615 - Seminar in Teaching**  
*School of Education*  
1-2 credit(s) Every semester  
Opportunities for students to critically reflect upon their inclusive field experience. Emphasis on professionalism, collaborative problem solving (including classroom management), planning and implementing curriculum and teaching strategies and becoming a productive school change agent.  
COREQ: EDU 508  
Repeatably 1 time(s), 3 credits maximum

**SPE 618 - Augmentation of Communication in the Inclusive Classroom**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Supporting students who are users of augmentative and alternative communication in inclusive classrooms. Variety of communication approaches, systems, and devices. Academic, social, legal, and policy issues.

**SPE 621 - Sociology of Disability**  
*School of Education*  
3 credit(s) Irregularly  
Crosslisted with: DSP 621  
Sociological perspectives on disability treatment approaches, and social policy toward the disabled. Personal and public forms of stereotyping, prejudices, and discrimination.

**SPE 623 - Families of Students with Disabilities**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Critical, contemporary issues affecting children and youth with special needs and their families.

**SPE 627 - Early Intervention for Children’s Reading Problems**  
*School of Education*  
3 credit(s) Every semester  
Crosslisted with: RED 626  
Research-based instruction for prevention and remediation of reading difficulties. Focus on preschool and early elementary children at risk for reading problems, as well as older elementary children labeled learning disabled, reading disabled, or dyslexic.

**SPE 633 - The High-Risk Infant: Medical Treatment and Educational Interventions**  
*School of Education*  
3 credit(s) Only during the summer  
Major medical conditions of newborns, associated developmental delays and disabilities, and ethical issues of medical treatment in neonatal intensive care. Problems of preterm, full-term, and post-term infants. Current issues (e.g., substance abuse, HIV/AIDS).

**SPE 634 - Collaboration/Cooperation in Schools**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: EDA 634  
Formal specialized services and informal support networks that promote collaboration between teachers, administrators, therapists, paraprofessionals, students, families, and community members.

**SPE 644 - Significant Disabilities: Shifts in Paradigms and Practices**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: DSP 644  
Curriculum development, methods, materials, and instructional strategies, emphasizing inclusive settings. Discrimination encountered; history and experiences (e.g., eugenics, racial stereotypes, gender roles, and ideas of progress); perspective of those with significant disabilities.

**SPE 649 - Practicum in Significant Disabilities**  
*School of Education*  
1 credit(s) At least 1x fall or spring  
Field-based practicum with students with significant disabilities in inclusive settings.  
COREQ: SPE 644

**SPE 652 - Assistive Technologies for Integrating Students with Special Needs**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: DSP 652, IDE 652  
Development of integrative technologies and strategies that can be functional in both educational and work environment. Support and adaptation for individuals with physical, educational, and language challenges.

**SPE 653 - Positive Approaches to Challenging Behaviors**  
*School of Education*  
3 credit(s) Only during the summer  
Approaches for supporting elementary children with challenging behaviors. Conflict resolution, peer mediation, prosocial behavior, skillstreaming, and cooperative learning.

**SPE 665 - Positive Behavior Supports in Secondary Schools**  
*School of Education*  
3 credit(s) Only during the summer  
Approaches to help support positive behavior in adolescents. Theories and characteristics of emotional and behavioral disabilities; historical perspective; current research; assessment techniques; effective strategies for schools, classrooms and individuals.

**SPE 688 - Social Policy and Disability**  
*School of Education*  
3 credit(s) Irregularly  
Crosslisted with: CFE 688, DSP 688  
Trends and issues in the field and forces within society (political, economic, cultural, historical, and social) that affect people with disabilities.

**SPE 690 - Independent Study**  
*School of Education*  
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

**SPE 705 - Practicum in Psychoeducational Evaluation and Planning for Exceptional Children**  
*School of Education*  
3-6 credit(s) At least 1x fall or spring  
Working on a psychoeducational teaching laboratory team, students learn to evaluate and plan programs for youngsters with puzzling learning and/or behavioral difficulties using home and school observations, formal, informal, and curriculum-based assessment strategies.

**SPE 706 - Seminar in Early Childhood Special Education**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Key issues facing the field of early childhood special education. Medical and environmental influences on development, teen pregnancy, substance abuse, current legislation affecting programs, and new approaches to early intervention.

**SPE 724 - Inclusive Professional Practices in Special Education**  
*School of Education*  
3 credit(s) At least 1x fall or spring  
Roles and responsibilities of special education teachers in inclusive schools. Essential skills and dispositions associated with quality inclusive practice, including professional standards, ethical principles, individualized educational planning,
and research-based practices.

PREREQ: SPE 612 OR 412

**SPE 727 - Perspectives on Learning Disabilities**  
*School of Education*

3 credit(s) Upon sufficient interest

Historical and current theoretical perspectives. Research related to factors that interfere with learning and its implications for instruction. For students in learning disabilities, special education, communicative disorders, rehabilitation, reading, and psychology.

**SPE 860 - Proseminar in Inclusive Education**  
*School of Education*

3 credit(s) Irregularly

Research approaches. Methods, conceptual processes for research design, and practice. How scholars frame research questions, incorporate values in research development, and interpret research findings.

Repeatable 1 time(s), 6 credits maximum

**SPE 900 - 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
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 high-technology, 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.

Graduate Program Overview

The College of Engineering and Computer Science was established in 1901, the fifth of the 11 schools and colleges within Syracuse University today. The college is dedicated to graduate as well as undergraduate education in engineering, computer science, systems and information science, and research. Its research efforts, which total nearly 25 percent of all sponsored research at Syracuse University, contribute significantly to student development as well as to the continued professional growth of the faculty. Graduate education and research, particularly at the Ph.D. level, are inseparable.

The faculty numbers 80 full-time members, most of whom are research scholars of national and international renown. Full-time graduate enrollment in the college totals approximately 1100 students.

Distance Programs

The College of Engineering and Computer Science has a long and proud history of preparing students to produce practical and sustainable solutions for the most important technological, scientific, and social challenges impacting the future. Through our highly interactive online degree programs, students develop the skills to address critical issues ranging from national security threats to building energy efficient systems. Our online master's degree programs take education beyond theoretical learning with inclusive, interdisciplinary, and collaborative experiences that prepare graduates to solve real-world problems.

Through cutting-edge research, curricular innovations, and multidisciplinary collaboration, the Master of Science in Computer Science prepares students to discover groundbreaking solutions to the world's most complex technological challenges. Through a curriculum that places an emphasis on technological evaluation, the program prepares students to: Incorporate emerging technologies into new system designs; Develop expertise in areas such as security and assurance, artificial intelligence, computer architecture, and advanced programming; and Build the analytical, critical-thinking, and mathematical skills necessary to take on advanced challenges.

The Master of Science in Computer Engineering program teaches students to create groundbreaking hardware, software, and assured solutions for new and emerging systems. The M.S. in Computer Engineering curriculum is crafted around our faculty's groundbreaking research in the areas of: Artificial intelligence; The application of data mining methodologies; Assured systems that degrade the face of attack and failure; and The intersection of computational complexity, formal methods, and programing language semantics. Students learn innovative thinking strategies and solve computer engineering challenges in areas such as security and assurance, network systems, computer architecture, and advanced programming.

Students in all of our online programs complete an academically rigorous curriculum and learn in an online environment that mirrors the close interactions of traditional residential degree programs. Courses are taught by many of the same faculty members who teach on campus and faculty are trained in the unique aspects of teaching online. In addition to theoretical learning, our online programs challenge students with inclusive, interdisciplinary experiences that prepare them for real-world applications that enhance their computational, analytical, critical-thinking, and problem-solving skills. More information about Syracuse University's College of Engineering and Computer Science online graduate programs can be found at http://engineeringonline.syr.edu

For a complete listing of faculty affiliated with the
College of Engineering and Computer Science, see the Faculty section.

Admission
Applicants must complete the application for admission found online at apply.embark.com/grad/syracuse. International students must take the general Graduate Record Examination (GRE); this requirement is rarely waived.

Please note that failure to see that transcripts, letters of recommendation, or GRE scores are provided may delay processing. It is advisable to apply as early as possible.

Nonmatriculated students may register through University College. Up to 12 credits of nonmatriculated graduate credit may be transferred toward a degree program if the applicant is subsequently admitted. Performance in courses taken for nonmatriculated credit carries considerable weight in evaluating the application.

Graduate Awards
Syracuse University fellowships are awarded competitively from applications received by January 1 on an all-University basis. Doctoral fellows receive a stipend, plus a tuition scholarship of 30 credits for the academic year. Fellows devote full time to their studies and are not assigned duties.

Graduate assistantships in the form of research assistantships and teaching assistantships are awarded on a competitive basis from among applications received by February 1; assistantships are usually not available at any other time of the year. Research assistants are required to assist their sponsoring faculty to perform research. Teaching assistants are required to assist with undergraduate/graduate instruction as well as to work on research projects.

Recipients of these assistantships receive a stipend in addition to a tuition scholarship for up to 24 credits per year.

Information about programs to support graduate students from ethnic minority groups (African, Latino, and Native American) that are underrepresented in science and engineering fields can be found in the publication Graduate Study: College of Engineering and Computer Science.

Securing loans and part-time jobs is the responsibility of the student.

To apply for fellowships or assistantships, check the proper place on the application for admission.

Bioengineering, MS

Department Chair:
Radhakrishna Sureshkumar, 329 Link Hall, 315-443-1931; fax: 315-443-9175

Faculty
Jesse Q. Bond, Katie D. Cadwell, Ruth Chen, Mandy B. Esch, Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, Ian Hosein, George C. Martin, Patrick T. Mather, Shikha Nangia, Dachen Ren, Ashok Sangani, Pranav Soman, Radhakrishna Sureshkumar, Lawrence L. Tavlarides,

Adjunct/Research Faculty:
Jürgen Babirad, Gino Duca, Bart Farrell, Eric Finkelstein, Patrick T. Mather, Shelley Stephens, Kent Ogden, David Quinn, Dana Radcliff, Suresh Santanam, Fred Werner

Affiliate Faculty:
Joseph Chaiken, Andria Costello Staniec, Martin Forstner, Yan-Yeung Luk, Juntao Luo, Cristina Marchetti

Emeritus Faculty:
Gustav Engbretson, John Heydecker, Philip Rice, Klaus Schroder, Robert L. Smith, S. Alexander Stern, Chi Tien, Josef Zwislocki

Graduate Bioengineering Program Director:
James Henderson, 318 Bowne Hall, 315-443-9739; jjhenderson@syr.edu

The Department of Biomedical and Chemical Engineering offers a comprehensive set of graduate programs in bioengineering and chemical engineering, including master’s of science (MS) degrees and doctor of philosophy (PhD) degrees. Graduates of these programs work in the medical profession, the biomechanics and bioinstrumentation industries, the chemical engineering industry, the government, and in education.

The graduate program in bioengineering provides a wide range of opportunities for advanced study in this interdisciplinary field. This graduate program is linked with and focused on research programs in biomaterials and tissue engineering; biomechanics; orthopedic biomechanics; cardiac bioengineering; and neural engineering. Which degree to consider depends on one’s career goals.

Major research laboratories include the Syracuse Biomaterials Institute, the Institute for Human Performance, and laboratories at nearby SUNY Upstate Medical University. Strong collaboration between Upstate Medical University and Syracuse University faculty, students, and staff provides opportunities for bioengineering research in clinical and basic science departments at Upstate, as well as in-depth study at one of the Syracuse University bioengineering research centers.

Major Requirements
The Master’s of Science (MS) in Bioengineering is a flexible program with three options to help students develop careers in this field. The MS can be a terminal degree or an introduction to research before pursuing the PhD.

There are three options that students can choose. Plan 1 has a minimum requirement of 30 credit hours of graduate study, including 24 credits of coursework plus 6 credits of thesis. A master’s thesis must be completed and defended in an oral examination. Plan 2 also has a minimum requirement of 30 credits with at least 27 credits of coursework plus 3 credits of independent study. Plan 3 is a non-thesis program with cognate field. It requires a total of 36 credits with a minimum of 24 credits of technical coursework and 12 credits of tailored, non-technical concentrations. All three programs are designed to be completed in at least two years.

The requirements for the three MS degree options are as follows:

Master’s of Science with Thesis (Plan 1)

- 30 total credits
- 15 credits of Bioengineering (BEN) courses,
- 3 credits of Ethics (Bio-ethics or engineering ethics);
- 6 credits of thesis;
- remaining 6 credits selected from science, technology, engineering, or mathematics (STEM) courses;
- student must complete a thesis and defend it in an oral examination (see below);
- no more than 50% of coursework at 500-level;
- minimum GPA of 3.0 for coursework included on Program of Study for the degree;
- minimum GPA of 2.8 for all credits earned.

Master’s of Science Non-Thesis (Plan 2)

- 30 total credits
- 15 credits of Bioengineering courses,
- 3 credits of Ethics (Bio-ethics or engineering ethics);
- successful completion of the M.S. project course (see below)
- remaining 9 credits selected from science, technology, engineering, or mathematics (STEM) courses;
- student must complete an oral comprehensive examination based on the independent study and the coursework (see below);
- no more than 50% of coursework at 500-level;
- minimum GPA of 3.0 for coursework included on Program of Study for the degree;
- minimum GPA of 2.8 for all credits earned.

Master’s of Science Non-thesis with Cognate Field (Plan 3)

- 36 total credits (minimum of 24 credits of...
technical coursework and 12 credits of tailored concentrations)

- 24 credits of technical coursework must include:
- 15 credits of Bioengineering courses;
- 3 credits of Ethics (Bio-ethics or engineering ethics);
- remaining 6 credits selected from science, technology, engineering, or mathematics courses;
- 12 credits of tailored concentrations in areas such as Technology Transfer and Law (College of Law), Engineering Management (College of Engineering and Computer Science), or a customized sequence of courses of a non-technical nature;
- successful completion of the M.S. project course (see below);
- student must complete an oral comprehensive examination based on the Capstone Project and the coursework (see below);
- no more than 50% of coursework at 500-level;
- minimum GPA of 3.0 for coursework included on the Program of Study for the degree;
- minimum GPA of 2.8 for all credits earned.

General Information for MS Degree Programs

Residence Time:
The MS degree typically requires three to four semesters to complete.

Graduate Seminar:
Attendance at the BMCE Graduate Seminars is expected of students in all graduate programs.

M.S. Project Course Requirement
(Bioengineering only):
Successful completion of the M.S. project course.

Oral Comprehensive Examination:
The Oral Comprehensive Examination will be the culminating event of the M.S. Project courses in Bioengineering and Chemical Engineering. Students will prepare and present the products/outcomes of their project to the departmental faculty and respond to questions from the faculty. The Oral Comprehensive Examination will occur once a year toward the end of the semester in which the M.S. Project courses take place. The examination committee will be composed of at least three department faculty, but all faculty are invited, and the examination will be scheduled to maximize faculty participation. The examination committee will meet separately to determine if the student has passed the examination, and the student will be informed of the decision. Students are required to submit an electronic copy and a printed copy on standard-size paper of presentation materials to the Graduate Secretary prior to the presentation.

Thesis Defense Requirements:
Completion of the MS degree with thesis requires a written MS thesis and an oral defense. Students must submit a Request for Examination Form to the GEMC at least three full weeks prior to the oral defense. The thesis document must be delivered to the MS Thesis defense committee at least two weeks prior to the date of the oral defense.

Defenses must comply with the requirements of the Graduate School as described in the Graduate Course Catalog. The MS Thesis defense committee consists of four members. The committee must include the thesis advisor, no fewer than two tenure-track members of the BMCE faculty, and the Chair of the Oral Examination Committee. If a proposed committee member is not a full-time or adjunct faculty member at Syracuse University (e.g., from SUNY-ESF, Upstate Medical University, etc.), the student must petition the Department to allow this person to serve as a committee member. The Chair of the Oral Examination Committee must be a Syracuse University tenured or tenure-track faculty member outside the department and program.

All students must submit two copies of the final version of the thesis, with the signed title page, to the Department in fulfillment of the requirements for the MS degree.

For information on the formatting of the final thesis document for submission to the Graduate School, see http://www.syr.edu/gradschool/em/current_whatyouneed.html.

Chemical Engineering, MS

Department Chair:
Radhakrishna Sureshkumar, 329 Link Hall, 315-443-1931; fax: 443-9175

Faculty
Rebecca Bader, Jesse Q. Bond, Katie D. Cadwell, Ruth Chen, Mandy B. Esch, Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, Ian Hosein, George C. Martin, Patrick T. Mather, Shikha Nangia, Dacheng Ren, Ashok Sangani, Pranav Soman, Radhakrishna Sureshkumar, Lawrence L. Tavlarides, Angela Zachman

Adjunct/Research Faculty:
Jurgen Babirad, Gino Duca, Bart Farrell, Eric Finkelstein, Shelley Stephens, Kent Ogden, David Quinn, Dana Radcliffe, Suresh Santanam, Frederick Werner

Affiliate Faculty:
Joseph Chaiken, Andria Costello Staniec, Martin Forstner, Juntao Luo, Yan-Yeung Luk, Cristina Marchetti

Emeritus Faculty:
Gustav Engbreton, John Heydweiller, Philip Rice, Klaus Schroder, Robert L. Smith, S. Alexander Stern, Chi Tien, Josef Zwislocki

Graduate Chemical Engineering Program
Director:
Dacheng Ren, 357 Link Hall, 315-443-4409, dren@syr.edu

The Department of Biomedical and Chemical Engineering offers a comprehensive set of graduate programs in bioengineering and chemical engineering, including master’s of science (MS) degrees and doctor of philosophy (PhD) degrees. Graduates of these programs work in the medical profession, the biomechanics and bioinstrumentation industries, the pharmaceutical industry, the chemical engineering industry, the government, and in education.

The graduate program in chemical engineering features a core of courses in chemical engineering, elective courses in areas of student interest, and an intense research or independent study experience with the student’s faculty advisor. Elective courses may be concentrated in a large number of special areas, including bioengineering, environmental engineering, computer science, materials science, and manufacturing engineering. New initiatives are underway in the multidisciplinary area of environmental systems that should provide a wealth of opportunities to graduate students in chemical engineering.

M.S. in Chemical Engineering

The Master’s of Science degree in Chemical Engineering is a flexible and individually-structured program, determined by the student and his/her advisor. The MS can be a terminal degree or an introduction to research before pursuing the Ph.D.

There are two degree plans a student can choose. Plan 1 has a minimum requirement of 30 credit hours of graduate study, including 24 credits of coursework and 6 credits of thesis, with at least 12 credits of coursework in chemical engineering. A master’s thesis must be completed and defended in an oral examination. Plan 2 also has a minimum requirement of 30 credit hours of graduate study, including at least 3 credits of an independent study course, with at least 15 credits in chemical engineering. Both plans are designed to be completed in about two years.
Master's of Science with Thesis (Plan 1)

30 total credits:
- 24 credit hours of coursework, including at least 12 credits in chemical engineering (CEN);
- 6 credit hours of thesis;
- student must complete a master's thesis and defend it in an oral examination (see below);
- no more than 50% of coursework at 500-level;
- minimum GPA of 3.0 for coursework included on the Program of Study for the degree;
- minimum GPA of 2.8 for all credits earned.

Master's of Science Non-Thesis (Plan 2)

30 total credits:
- at least 15 credits of coursework in chemical engineering (CEN);
- successful completion of the M.S. project course;
- after completion of the coursework, the student must pass an oral comprehensive examination based on the independent study and the coursework (see below);
- minimum GPA of 3.0 for coursework included on the Program of Study for the degree;
- minimum GPA of 2.8 for all credits earned.

General Information for MS Degree Programs

Residence Time:
The MS degree typically requires three to four semesters to complete.

MS Project Class (Bioengineering and Chemical Engineering):

Effective Fall 2014, all non-thesis Master's students (plan 2 and 3 in Bioengineering, and plan 2 in Chemical Engineering) will be required to take the M.S. Project course. The successful completion of this course is a degree completion requirement. The project course will be optional for thesis students, on a space-available basis, with permission of the instructor.

Thesis Defense Requirements:

Completion of the MS degree with thesis requires a written MS thesis and an oral defense. Students must submit a Request for Examination Form to the GEMC at least three full weeks prior to the oral defense. The thesis document must be delivered to the MS Thesis defense committee at least two weeks prior to the date of the oral defense.

Defenses must comply with the requirements of the Graduate School as described in the Graduate Course Catalog. The MS Thesis defense committee consists of four members. The committee must include the thesis advisor, no fewer than two tenure-track members of the BMCE faculty, and the Chair of the Oral Examination Committee. If a proposed committee member is not a full-time or adjunct faculty member at Syracuse University (e.g. from SUNY-ESF, Upstate Medical University, etc.), the student must petition the Department to allow this person to serve as a committee member. The Chair of the Oral Examination Committee must be a Syracuse University tenured or tenure-track faculty member outside the department and program.

All students must submit two copies of the final version of the thesis, with the signed title page, to the Department in fulfillment of the requirements for the MS degree.

For information on the formatting of the final thesis document for submission to the Graduate School, see http://www.syr.edu/gradschool/em/current_whatyouneed.html.

Civil Engineering, MS

Department Chair
Dr. Ossama "Sam" Salem, 151 Link Hall, onsalem@syr.edu, 315-443-2311

Program Director:
Dr. Dawit Negussey, 151 Link Hall, negussey@syr.edu,

Civil Engineering Faculty
Riyad S. Aboutaha, Hossein Ataei, Shobha K. Bhatia, Eric M. Lui, Dawit Negussey, Ossama "Sam" Salem, Baris Salman

Program Description

The graduate programs in civil engineering at Syracuse University have earned a reputation for superior quality and placing students at the center of attention. Degree recipients working in the public sector, private industry, and academic institutions have made important contributions to the profession. The Civil Engineering program provides coursework and research opportunities in structural engineering, geotechnical engineering, environmental engineering, infrastructure management, sustainable development, and construction engineering and management.

In addition to these core areas, the students and faculty in the Civil Engineering program engage in interdisciplinary teaching and research, expanding the opportunities available to graduate students. The department is home to the Center for Environmental Systems Engineering, which serves faculty in environmental, chemical, and mechanical engineering with a shared interest in environmental systems. The Geofoam Research Center is also administered in the department. We also have a collaborative degree program with the Maxwell School of Citizenship and Public Affairs and we engage in joint teaching with faculty in the School of Architecture, the Whitman School of Management, and at SUNY-ESF.

The M.S. degree in Civil Engineering is a flexible and individually structured program with either a thesis or non-thesis option. Students anticipating further graduate study at the doctoral level should pursue the thesis option. Applicants will also have the option of selecting one of three available tracks: Construction Engineering and Management, Geotechnical Engineering, or Structural Engineering. Students usually complete the M.S. degree within one to two years.

Admission Requirements

B.S. in Civil Engineering or the equivalent from an accredited institution. Candidates with undergraduate degrees in another field must have their programs evaluated to determine if additional undergraduate courses are to be included in their program of study.

At least a 3.0 in a 4.0 rating system or equivalent in the B.S. program coursework.

Satisfactory scores on all required graduate entrance examinations. A TOEFL score of 80 or higher is required for international students.

Departmental approval.

Program Requirements

Programs are planned by the students in consultation with their advisors. At least half of
the coursework must be at or above the 600 level. Students who have taken the lower level of a double-numbered course (e.g., a course offered at the 400 and 600 levels) may not take the higher level of the same course for credit.

M.S. candidates may transfer a maximum of 6 credits from other institutions. They are expected to complete their entire program within five calendar years of their admission.

Thesis and non-thesis options are available. Students anticipating further graduate study at the doctoral level should pursue the thesis option.

Requirements with Thesis (30 credits)

Completion of 9 to 12 credits of core courses in either structural, geotechnical or construction engineering. These required courses are specified in the Graduate Program Profile, available in the department office.

Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile.

CIE 997 - Masters Thesis for 6 credits.

Defense of thesis.

Participation in the faculty/student seminar program (CIE 660).

Requirements without Thesis (30 credits)

Completion of 9 to 12 credits of core courses in either structural, geotechnical or construction engineering. These required courses are specified in the Graduate Program Profile, available in the department office.

Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile.

Complete one of the following:

CIE 996 - Master's Project (3 credits)

CIE 995 - Master's Exit Paper (0 credits) and one additional elective course (3 credits).

Participation in the faculty/student seminar program (CIE 660).

Additional Information:

The Master's project must address a topic in civil engineering approved by the advisor and at least one additional reader.

The exit paper must address a topic related to their specialty. The paper can be original research work or it can be a critical review of a published journal article. The paper has a minimum length of 2000 words and requires approval of the student’s advisor.

Computational Journalism, MS

Contact:
Stephen Masiclat, masiclat@syr.edu
Professor, Co-Director, 255 Newhouse 3
315-443-9243
Jae C. Oh, jcoh@syr.edu
Associate Professor, Co-Director, 4-206 Sci & Tech

Faculty
Aileen Gallagher, Roy Gutterman, Stephen M. Masiclat, Nancy McCracken, Kishan G. Mehrotra, Jae C. Oh, Adam R. Peruta

The computational Journalism program prepares students for the application of computation to the activities of journalism such as information gathering, organization, and dissemination while upholding values of journalism such as accuracy and verifiability. The program prepares students to learn computing fundamentals and skills required for supporting journalistic activities such as news gathering, investigative journalism, verification/fact finding, and authoring/printing/publication/broadcasting of news, sharing and distribution of news information, editing and commenting on news.

Admission:
Bachelor’s degree from an accredited institution in Computer Science or Journalism, or Bachelor’s degree from an accredited institution and significant experience working as a professional journalist (applicant must provide a portfolio of published/broadcast stories).

This 36-37 credit program leads to a Master of Science (M.S.) in Computational Journalism.

Requirements:

Track No 1 Students with a B.S. in Computer Science or related degree

- CIS 668 - Natural Language Processing 3 credit(s) or
- IST 664 - Natural Language Processing 3 credit(s)
- COM 670 - Experience Credit 1-6 credit(s)
- COM 698 - Media Law 3 credit(s)
- CPS 681 - Explorations in Computing and Programming 3 credit(s)
- CPS 688 - Algorithms for Computational Journalism and Linguistics 3 credit(s)
- CPS 689 - Capstone Project Course for Computational Journalism 3 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)
- ICC 505 - Web Journalism and Innovation 3 credit(s)
- NEW 605 - News Writing and Reporting 3 credit(s)
- MNO 601 - Principles: Business, History, and the Ethics of Journalism 3 credit(s)
- MNO 617 - Multiplatform Reporting and Writing 3 credit(s)

Journalism elective, subject to advisor’s approval (3 credits)

Total Credits: 36

Track No 2 Students with a B.A. or B.S. in Journalism

- CIS 668 - Natural Language Processing 3 credit(s) or
- IST 664 - Natural Language Processing 3 credit(s)
- COM 670 - Experience Credit 1-6 credit(s)
- COM 698 - Media Law 3 credit(s)
- CPS 621 - Introduction to Probability and Statistics 4 credit(s)
- CPS 688 - Algorithms for Computational Journalism and Linguistics 3 credit(s)
- CPS 689 - Capstone Project Course for Computational Journalism 3 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)
- ICC 606 - Applied Research in Content Management 3 credit(s)
- NEW 535 - Newspaper and Magazine Practicum 1-3 credit(s)

A Newhouse, CIS/CPS, IST elective, subject to advisor’s approval (3 credits)

Total Credits: 37

Possible Elective Choices (others allowed with advisor’s approval):

CIS options
- CIS 681 - Software Modeling and Analysis 3 credit(s) or
- CSE 681 - Software Modeling and Analysis 3 credit(s)
- CIS 687 - Object Oriented Design 3 credit(s) or
- CSE 687 - Object Oriented Design 3 credit(s)

IST options
- IST 657 - Basics of Information Retrieval Systems 3 credit(s)
- IST 719 - Information Visualization 3 credit(s)
College of Engineering and Computer Science

• IST 736 - Text Mining 3 credit(s)

Newhouse options
• ICC 600 - Selected Topics 1-6 credit(s) Advanced Web Journalism/Innovation
• ICC 528 3 credit(s) Multimedia Projects
• MNO 617 - Multiplatform Reporting and Writing 3 credit(s) (for students in track 2)

Computer Engineering
(Distance Format), MS

Program Director
Qinru Qiu, 4-133 Center for Science and Technology, 315-443-4440, Fax: 315-443-2583; qiqiu@syr.edu

Faculty

Description
For students who want to expand their technical expertise beyond their undergraduate major, the Department of Electrical Engineering and Computer Science (EECS) offers Master of Science (M.S.) degree in computer engineering. EECS has a long and distinguished record of graduate education, with many of our graduates placed in key positions in industry. Graduates from our master's programs are well represented in such corporations as IBM, General Electric, Lockheed Martin, Microsoft, and Intel.

Admission
A bachelor's degree in Computer Engineering, Electrical Engineering, or a related field from an accredited institution is required, with an average GPA of 3.0 or better.

GRE Verbal score of 150 or better (using New GRE Score System); GRE Quantitative score of 155 or better (using New GRE Score System); GRE Analytical (multiple choice) score of 650 or better, or a score of 3.5 or better in the new Analytical Writing; for international students: TOEFL computer-based score of 223 (Internet-based score 85; paper-based score 563) or better; GPA of 3.0/4.0 or better.

Degree
The M.S. in Computer Engineering requires students to complete 30 total credits including 12 credits of core courses and 18 credits of electives.

Transfer Credit
A maximum of 9 transfer credits for students admitted to the online programs. Transfer credits are certified after the students complete their course work requirements. Upon completion of course work, the College forwards the necessary paperwork to the Graduate School, which certifies any transfer credits (as well as the credits completed with us) prior to graduation.

Part-time Study
The online MSCS program can be completed part-time.

Satisfactory Progress
The student must maintain a cumulative total GPA of at least 3.0 in those courses to be credited towards the M.S. degree, and a minimum cumulative total GPA of 2.8 in all graduate courses taken at Syracuse University.

Total Credits: 30
The Master of Science in Computer Engineering curriculum consists of 30 credit hours, 12 of which are from core courses, and the remaining credit hours are earned through elective courses.

Computer Engineering, MS

Program Director
Qinru Qiu, 4-133 Center for Science and Technology, 315-443-1836, Fax: 315-443-2583; qiqiu@syr.edu

Faculty

Master of Science Programs

The requirements for the M.S. emphasize mastery of a field of knowledge and some familiarity with allied areas. Programs are tailored to meet the needs of the individual with certain general restrictions set by the department. All degree candidates are required to take work of a basic nature in several fields to provide the necessary breadth of knowledge.

The M.S. programs consist of at least 30 credits beyond the B.S. degree. A thesis is optional. Students who do not have B.S. degrees in electrical engineering or computer engineering are required to take specified additional courses at the undergraduate or graduate level to make up for deficiencies in their preparation.

In addition to the requirements outlined in the “Requirements for Graduate Degrees” section of this catalog, several departmental requirements apply to the M.S. in both electrical engineering and computer engineering. Not more than 6 credits of 500-level courses may be included in an M.S. program. A maximum of 9 credits of transfer credit may be included in M.S. programs. For further information, students may obtain a copy of the Transfer Credit Policy from the department.

Early in the student's final semester, an official Program of Study form must be submitted to the department. A diploma request card must also be included.

Admission Requirements
Each of these master's programs has its own admission committee that evaluates the overall academic record of an applicant. Each of these committees uses the following guidelines during the evaluation process:
• GRE Verbal score of 150 or better (using New GRE Score System);
• GRE Quantitative score of 155 or better (using New GRE Score System);
• GRE Analytical (multiple choice) score of 650 or better, or a score of 3.5 or better in the new Analytical Writing;
• for international students: TOEFL computer-based score of 223 (Internet-based score 85; paper-based score 563) or better;
• grade point average (GPA) of 3.0/4.0 or better.

Course Requirements
1. Graduate Work Beyond the B.S. Degree
A minimum of 30 credits of graduate work beyond the B.S. degree is required.

2. Cumulative Total GPA
The student must maintain a cumulative total GPA of at least 3.0 in those courses to be credited towards the M.S. degree, and a minimum
cumulative total GPA of 2.8 in all graduate courses taken at Syracuse University.

3. A Maximum of 9 Credits of Transfer Credit of Graduate Coursework

A maximum of 9 credits of transfer credit of graduate coursework taken at another university with a grade of B or better may be included in an M.S. program.

4. A maximum of 12 Credits Taken at Syracuse University

A maximum of 12 credits taken at Syracuse University before the semester of admission may be included in an M.S. program provided they are relevant to a program in computer engineering and have a grade of B or better.

5. Preliminary Program of Study

Late in the first semester, the student fills out a preliminary program of study. Early in a student’s final semester, a Program of Study must be submitted on forms available from the department. A Diploma Request Card must also be submitted at that time.

6. To Maintain Full-time Status in the EECS Department

To maintain full-time status in the EECS Department, students must register for at least 9 credits per semester. During the last semester of course work, student can take less than 9 credits be considered as full-time student. Part-time students must complete at least 6 credits per academic year.

7. Each student must select one of the three following tracks for the degree:

(1) Hardware Systems Track, (2) Software Systems Track, and (3) Security and Assurance Systems Track. Each student’s program must include CSE 674* and CSE 661. Moreover, each student in the Hardware Systems Track must include CSE 664 and CSE 687 in their program, and each student in the Security and Assurance Systems Track must include CSE 643 and CSE 644 in their program. These courses represent the student’s core program and are to be taken as early as possible in the program. In addition, each student’s program must include at least two more elective track-specific courses in the selected track as specified by the Computer Engineering Program Committee. The followings are some examples of the track related electives.

Electives for Hardware System Track:
- CSE 561 - Digital Machine Design 3 credit(s)
- CSE 788 - Computer-Aided Design for VLSI and Digital Systems 3 credit(s)
- ELE 643 - Theory of Semiconductor Devices 3 credit(s)
- CSE 671 - Embedded System Design 3 credit(s)
- CSE 731 - VLSI Timing Analysis 3 credit(s)
- CSE 765 - VLSI Testing and Verification 3 credit(s)

Electives for Software Systems Track:
- CIS 625 - Computer Graphics 3 credit(s)
- CIS 657 - Principles of Operating Systems 3 credit(s)
- CSE 643 - Computer Security 3 credit(s)
- CSE 682 - Software Engineering 3 credit(s)
- CSE 776 - Design Patterns 3 credit(s)
- CSE 778 - Advanced Windows Programming 3 credit(s)
- CIS 623 - Structured Programming and Formal Methods 3 credit(s)
- CIS 644 - Internet Security 3 credit(s)
- CSE 686 - Internet Programming 3 credit(s)
- CSE 775 - Distributed Objects 3 credit(s)
- CSE 782 - Models and Metrics in Software Engineering 3 credit(s)
- CSE 784 - Software Engineering Studio 3 credit(s)
- CSE 787 - Analytical Data Mining 3 credit(s)

Electives for Security and Assurance Systems Track:
- CSE 774 - Principles of Distributed Access Control 3 credit(s)
- CSE 681 - Software Modeling and Analysis 3 credit(s)
- CIS 657 - Principles of Operating Systems 3 credit(s)
- CSE 607 - Mathematical Basis for Computing 3 credit(s)
- CIS 628 - Introduction to Cryptography 3 credit(s)
- CSE 765 - VLSI Testing and Verification 3 credit(s)
- CSE 687 - Object Oriented Design 3 credit(s)

8. Programs must include a minimum of 18 credits of CSE courses

9. Final Examinations

Candidates are required to complete the final examinations in all core courses with an average grade of B- or better.

10. No more than 6 credits of 500-level courses may be included in an M.S. program

11. Taking Courses Offered by Other Department

Taking courses offered by other department or courses not directly relevant to computer engineering will require prior approval by the CE program committee.

12. Students may select a thesis option up to 6 credits

The Master’s Thesis must be prepared in accordance with the Graduate School’s instructions for the Preparation of Theses and Dissertations and must receive prior approval from the thesis advisor. Theses must be presented orally and defended before a faculty panel. Students electing the thesis option must include CSE 997 - Masters Thesis (normally 6 credits) in their programs of study.

13. Student may take up to 3 independent study credits

Anything above that will require prior approval from faculty advisor.

Note:
*CSE 674 was formerly CSE 691 (Special Topics in Advanced Data Structure).

Computer Engineer Degree

Admission Requirements

An M.S. in computer engineering, electrical engineering, or a related field from an accredited institution is required, with an average of 3.3 or better on a scale of 4.0. Applicants are informed of any additional requirements when their applications are processed.

Guidance

Each student is assigned a guidance committee to help plan a program of study.

Program Summary

The program consists of coursework, qualifying examinations, and a project. The minimum program consists of 60 credits beyond the B.S. degree, at least 4 ELE/CSE courses exclusive of independent study must be at or above the 700 level beyond M.S. degree. The student must maintain an average of 3.0 or better on a scale of 4.0.
Qualifying Examination
Written qualifying examinations are administered at the end of the student’s formal coursework. Each student is examined in specific topic areas.

The current list of topics and descriptions of the nature and scope of these examinations may be obtained from the department office. All examination topics must have the approval of the student’s guidance committee and one topic must be in the student’s major field.

Examination periods are scheduled twice a year. The student must take all examinations during the same examination period. Credit granted at other approved institutions does not exempt a student from any part of the qualifying examination.

The Computer Engineer Degree Project
CSE 995 This project allows the student to undertake an investigation which may be original research, an application of the state-of-the-art, a solution of a set of related minor problems, or a critical survey of a special topic. The topic may be suggested by a faculty member or, preferably, by the student. The student is assigned a project advisor, who must approve the topic and agree to direct the work. Students with engineering employment may make arrangements to carry out the project work on the employer’s premises or laboratory, provided the advisor has unrestricted access to the work. A formal project report and a final examination on this report are required after the completion of all graduate work.

Time Limit
Degree requirements must be completed within a period of three years after the student passes the qualifying examinations.

Computer Science (Distance Format), MS

Program Director
Susan Older, 4-181 Center for Science and Technology, 315-443-4679, Fax 315-443-2583; sueo@ecs.syr.edu

Faculty

Description:
For students who want to expand their technical expertise beyond their undergraduate major, the Department of Electrical Engineering and Computer Science (EECS) offers Master of Science (M.S.) degree in computer science. EECS has a long and distinguished record of graduate education, with many of our graduates placed in key positions in industry. Graduates from our master’s programs are well represented in such corporations as IBM, General Electric, Lockheed Martin, Microsoft, and Intel.

Accreditation:
Accredited by Middle States Association of Colleges and Schools

Admission:
A bachelor’s degree in Computer Science, Electrical Engineering, Electronics, Communication, Software Engineering, or a related field from an accredited institution, with an average GPA of 3.0 or better is required. Core competency in Discrete Mathematics, Calculus, Data Structures, Computer Organization, and knowledge of programming languages (C, C++, Java, etc.) is preferred.

GRE Verbal score of 150 or better (using New GRE Score System); GRE Quantitative score of 150 or better (using New GRE Score System); GRE Analytical (multiple choice) score of 650 or better, or a score of 3.5 or better in the new Analytical Writing; for international students: TOEFL score of 100 or better, or a score of 3.5 or better in the new GRE Verbal score of 155 or better (using New GRE Score System); GRE Quantitative score of 150 or better (using New GRE Score System).

Mathematics, Calculus, Data Structures, Computer Organization, and knowledge of programming languages (C, C++, Java, etc.) is preferred.

Transfer Credit
A maximum of 9 transfer credits for students admitted to the online programs. Transfer credits are certified after the students complete their course work requirements. Upon completion of course work, the College forwards the necessary paperwork to the Graduate School, which certifies any transfer credits (as well as the credits completed with us) prior to graduation.

Degree
The M.S. in Computer Science requires students to complete 30 total credits including 12 credits of core courses and 18 credits of electives.

Part-time Study
The online MSCS program can be completed part-time.

Satisfactory Progress
The student must maintain a cumulative total GPA of at least a 3.0 in those courses to be credited towards the M.S. degree, and a minimum cumulative total GPA of 2.8 in all graduate courses taken at Syracuse University.

Total Credits: 30
A candidate for MSCS degree is required to take 10 graduate level courses (30 credits), including four required (core) courses (see below). The remaining six courses are chosen by the candidate from a wide range of graduate level courses in computer science and computer engineering offered each semester to form a coherent program of study. Students found to be deficient in in certain areas may be required to take a remedial course in their first semester of study.

Computer Science, MS

Program Director
Susan Older, 4-181 Center for Science and Technology, 315-443-4679, Fax 315-443-2583; sueo@ecs.syr.edu

Faculty

Master of Science Programs
For students who want to expand their technical expertise beyond their undergraduate major, the Department of Electrical Engineering and Computer Science (EECS) offers master of science (M.S.) degrees in computer engineering, computer science, and electrical engineering. EECS has a long and distinguished record of graduate education, with many of our graduates placed in key positions in industry. Graduates from our master’s programs are well represented in such corporations as IBM, General Electric, Lockheed Martin, Microsoft, and Intel. In all of these degrees, students have the option of completing the M.S. degrees by taking only courses, or by combining coursework with a master's thesis.

Students who are contemplating continuing their studies at the Ph.D. level are encouraged to complete an M.S. degree with the thesis option. Students enrolled in the non-thesis option in one of these M.S. programs may finish the M.S. degree in one year if they choose. To accomplish this,
students must take courses in the fall, spring, and summer semesters. Students may also complete the degree in a less intensive fashion over three or four regular semesters.

Professionals having a baccalaureate degree in fields other than computer engineering, computer science, or electrical engineering who are seeking a career change may take advantage of an opportunity to obtain an M.S. degree in one of these fields by combining suitable remedial undergraduate coursework with the regular program of graduate study.

## Admission Requirements

Each of these master's programs has its own admission committee that evaluates the overall academic record of an applicant. Each of these committees uses the following guidelines during the evaluation process:

- GRE Verbal score of 150 or better (using New GRE Score System);
- GRE Quantitative score of 155 or better (using New GRE Score System);
- GRE Analytical (multiple choice) score of 650 or better, or a score of 3.5 or better in the new Analytical Writing;
- for international students: TOEFL computer-based score of 223 (Internet-based score 85; paper-based score 563) or better;
- grade point average (GPA) of 3.0/4.0 or better.

Each candidate must submit a coherent program of 10 graduate courses (30 credits), which must be passed with a grade point average of 3.0 (B) or better. Students also need to satisfy a minimum cumulative total GPA of 2.8 in all graduate courses taken at Syracuse University. In each of the core courses, the student must achieve a grade of B- or better. No more than 6 credits of 500-level courses may be included in the program. The Graduate School requires that master's programs be completed within seven years and that the student maintain a satisfactory rate of progress toward completion of degree requirements at all times. Within this program the student may elect to prepare and defend a master's thesis, in accord with the rules of the Graduate School, for up to six of the required 30 credits.

### Computer Science Core

All candidates for the M.S. in computer science must complete the computer science core:

- CIS 623 - Structured Programming and Formal Methods 3 credit(s)
- CIS 655 - Computer Architecture 3 credit(s)
- CIS 657 - Principles of Operating Systems 3 credit(s)
- CIS 675 - Design and Analysis of Algorithms 3 credit(s)

### Final Examinations and GPA Requirements

Candidates are required to complete the final examinations in all core courses with an average grade of 2.667 (B-) or better.

### English Proficiency Requirement

Students whose native language is not English will be required to demonstrate proficiency, both written and oral, in the English language. Students found to be deficient will be strongly advised to take remedial courses outside the degree program. Students with inadequate background may be required to take remedial courses, and those remedial courses cannot be counted toward the 30 credits required for the master's degree. The program must include a minimum of 18 credits of CIS courses and 8 courses at the 600-level or higher. Where applicable, students are required to complete stated prerequisites before enrolling in advanced courses. Responsibility for seeing that prerequisites are met rests with the student. To maintain full-time status in the EECs department, students must register for 9 credits per semester. Part-time students must complete at least 6 credits per academic year. Other program regulations may exist. Students are expected to follow all program regulations.

### One-Year M.S. Program in Computer Science

Students with a strong academic preparation may finish the master's degree in computer science in one year if they choose to do so. To do this, they must start the program in the fall semester, take four courses in the fall semester, four courses in the spring semester, and two courses in the summer. Students may also complete the degree in a less intensive fashion over three or four semesters.

International students must be enrolled for at least nine credits (usually three courses) during the fall semester and at least nine credits in the spring semester (for a total of at least 18 credits per year).

### Three-Year M.S. Plan

The baccalaureate degree in many fields outside computer science may not constitute adequate preparation for the mathematical and technical aspects of graduate study in computing. Students with such a background who nevertheless are seriously interested in a graduate degree in computer science may achieve the needed preparation by combining suitable undergraduate coursework with the regular program of graduate study requiring an additional year of coursework. Students beginning this work should have one year of calculus equivalent to MAT 295 and MAT 296, and at least one high-level programming language equivalent to CPS 196 Introduction to Computer Programming; C, or ECS 102 Introduction to Computing. (See Syracuse University Undergraduate Catalog for descriptions of MAT 295, MAT 296, CPS 196, ECS 102.) The following three-year plan of combined undergraduate and graduate coursework provides the student with the preparation described above, needed for completion of the graduate courses for the M.S. Courses numbered below 500 do not carry graduate credit and constitute the intermediate preparation needed for graduate courses listed later in the plan. Requirements for the M.S. in computer science remain as described above.

### First semester (Fall)

- CIS 375 - Introduction to Abstract Mathematics
- CIS 351 - Data Structures
- One elective graduate course with permission of Program Director

### Second Semester (Spring)

- CIS 352 - Programming Languages: Theory and Practice
- CIS 341 - Computer Organization and Programming Systems
- CIS 342 - Introduction to Systems Programming
- One elective graduate course with permission of Program Director

### Third Semester (Fall)

- One graduate elective
- CIS 477 Introduction to Algorithms
- CIS 486 Design of Operating Systems*

### Fourth Semester (Spring)

- CIS 623 - Structured Programming and Formal Methods 3 credit(s)
- CIS 655 - Computer Architecture 3 credit(s)
- CIS 675 - Design and Analysis of Algorithms 3 credit(s)

### Fifth Semester (Fall)

- CIS 657 - Principles of Operating Systems 3 credit(s)
- Two elective graduate courses

### Sixth Semester (Spring)

- Two elective graduate courses

### Admission

The graduate advisor is guided by the following admission requirements, which are intended to be the equivalent of the level of competency attained by a holder of the B.S. in computer science from the Department of Electrical Engineering and Computer Science.

### Academic Competency Requirements

Candidates are expected to possess competency in the following areas at a level equivalent to at least one of the indicated courses to each area. When an applicant's record indicates deficiencies in any of these areas, the graduate advisor will require that appropriate remedial
courses be taken. Graduate level courses taken for remediation may be included in an M.S. program to the extent permitted by other requirements.

(1) Higher-Level programming
- CIS 351 - Data Structures
- CIS 352 - Programming Languages: Theory and Practice
- CIS 453 - Software Specification and Design
- CIS 454 - Software Implementation

(2) Assembly Language Programming/Systems
- CIS 341 - Computer Organization and Programming Systems
- CIS 486 - Design of Operating Systems

(3) Mathematics
- CIS 375 - Discrete Mathematics

(4) Theoretical Computer Science
- CIS 473 - Computability Theory

(5) Algorithms and Computational Techniques
CIS 477 - Introduction to Analysis of Algorithms

Concurrent M.S. Degrees in Computer Science and Mathematics

Master of Science in Computer Science and Mathematics

In collaboration with the Mathematics Department in the College of Arts & Sciences, the Department of Electrical Engineering and Computer Science offers concurrent M.S. degrees in computer science and mathematics. Students complete a total of 51 credits, 30 in mathematics and 21 in computer science. Students who want to pursue this program should have a solid background in undergraduate mathematics, and knowledge of programming in high-level languages and of algorithms and data structures adequate for graduate study in computer science.

For further information, please contact the Graduate Enrollment Management Center, 315-443-2811, grad@syr.edu

Current EECS students: please contact the EECS Graduate Records Office, 315-443-2655, cvsalang@syr.edu

Cybersecurity, MS

Contact:
Dr. Kishan Mehrotra, Professor and Chair, mehrotra@syr.edu
4-177 Center for Science and Technology
315-443-2811

Faculty:

Description:
The global electrical power grid, financial services, and other critical infrastructure are inextricably dependent on robust cybersecurity to ensure security trust, and system assurance. The explosion in the Internet of Things domain is increasing connectedness amongst devices and the need for securing the resulting data is paramount in today’s world. Syracuse University’s M.S. in Cybersecurity program is designed to address this national and global need.

Syracuse University has been designated by the National Security Agency and Department of Homeland Security as a Center of Academic Excellence in Information Assurance Research (CAE-R) since 2009.

Learning Outcomes:
Students graduating from this program will be able to:
- identify and analyze vulnerabilities in systems;
- assess the risks faced by systems;
- develop countermeasures to remedy risks;
- develop systems that are secure;
- deliver software components or systems that have verifiable assurance properties.

Admission:
Applicants to the M.S. in Cybersecurity should have completed a B.S. in computer science or computer engineering and have the following knowledge and abilities:
- Basic systems knowledge (e.g., fundamentals of traps, interrupts, and trap handling at the instruction-set architecture level; concurrency and coordination mechanisms; access-control matrices, basics of access-control lists and capabilities) Systems programming basics
• Data structures
• Discrete mathematics
• High-level programming experience
• GRE Verbal score of 150 or better (using New GRE Score System);
• GRE Quantitative score of 155 or better (using New GRE Score System);
• GRE Analytical (multiple choice) score of 650 or better, or a score of 3.5 or better in the new Analytical Writing;
• for international students: TOEFL computer-based score of 223 (Internet-based score 85; paper-based score 563) or better;
• grade point average (GPA) of 3.0/4.0 or better.

Financial Support:
Some, but not all, students are provided merit-based tuition scholarships.

Requirements:
Students are required to complete 30 credit hours of courses, consisting of 15 credits of core, 9 credits of technical cybersecurity electives, and 6 credits in CIS/CSE courses at 600 level or higher, as described below:

15-credit core:
- CSE 643 - Computer Security 3 credit(s)
- CSE 644 - Internet Security 3 credit(s)
- CSE 634 - Assurance Foundations 3 credit(s)
- CIS 657 - Principles of Operating Systems 3 credit(s)
- CIS 675 - Design and Analysis of Algorithms 3 credit(s)

Technical Cybersecurity Electives
Students will take 9 credits of Technical Electives
- CIS 628 - Introduction to Cryptography 3 credit(s)
- CSE 774 - Principles of Distributed Access Control 3 credit(s)
- CIS 752 - Wireless Network Security 3 credit(s)
- Any 700-level security courses from ECE

Non technical cybersecurity electives:(Drawn from course offerings from units across SU including College of Law, the iSchool, and Maxwell)
- LAW 775 - Internet Law 3 credit(s)
- LAW 832 - Cyber Security Law and Policy 3
6 Additional Credits
6 additional credits drawn from the list of technical cybersecurity electives, the list of nontechnical cybersecurity electives, or from any CIS/CSE courses at the 600-level or higher. At most 3 credits of nontechnical cybersecurity electives are permitted.

Total Credits Required: 30

Degree Awarded:
Master of Science in Cybersecurity

Transfer Credit:
Up to 9 credits may be transferred from other schools, upon evaluation of details by the program director or department chair.

Part-time Study:
Part-time study may be permitted, but the program must be completed within four years from the date of admission into the program.

Satisfactory Progress:
A GPA of 3.0 must be maintained throughout the program or else matriculation may be terminated.

Electrical Engineering (Distance Format), MS

Program Director
Prasanta K. Ghosh, 4-131 Center for Science and Technology, 315-443-4440, Fax: 315-443-2583; pkg@eceesyr.edu

Faculty

Description:
The curriculum is built around current industry innovations and trend; the program pushes engineers to the forefront of their field with an immersive and concentrated educational experience.
Explore scientific principles and applications of electrical engineering such as:
- Digital Communication and Circuits
- Electromagnetic Fields
- Signal Processing and System Design
- Power Engineering

Accreditation:
Accredited by Middle States Association of Colleges and Schools.

Admission
Candidates are required to hold a Bachelor of Science degree and have acquired at least three years of industry experience in one of the following or a related field:
- Electrical
- Electronics
- Communication
- Computer
- Software engineering

Electrical Power
- GRE Verbal score of 150 or better (using New GRE Score System); GRE Quantitative score of 150 or better (using New GRE Score System); GRE Analytical (multiple choice) score of 650 or better, or a score of 3.5 or better in the new Analytical Writing; for international students: TOEFL computer-based score of 223 (Internet-based score 85; paper-based score 563) or better; grade point average (GPA) of 3.0/4.0 or better.

Financial Support
Syracuse University has a variety of financial aid programs to support graduate study, including scholarships, assistantships, and fellowships. These programs are administered within each of the University’s academic departments, so the fastest and easiest way to determine what aid you may be eligible for is to connect with specific school or college staff. Federal Unsubsidized Loans for masters, professional, and doctoral students are available for up to $20,500, (see eligibility requirements).

Federal financial aid, including loans, requires that you file the Free Application for Federal Student Aid (FAFSA).

Facilities
Classes are taught entirely online. Classrooms are equipped with at least two cameras, microphones (for the instructor and students) smart boards and/or tablet monitors and each class session will be webcast live.

Online students have the option to attend the live class session through an online web conferencing platform or view the recording after the class has ended. The web conferencing platform provides interface includes three pods: 1) Camera view of the instructor, 2) Display of the smart board or tablet monitor and 3) Chat tool through which students can pose questions to the instructor and other students. The audio feed will include the instructor and students in the classroom.

Software-based labs are completed using various applications that are downloaded or accessed remotely by the student. These labs are supported by live and recorded explanations and demonstrations by faculty and teaching assistants. In some classes, live support sessions are held online to assist students while they are completing the labs in their locations.

Labs that require tactile manipulation of instruments can be completed locally if the student has access to appropriate equipment (oscilloscope, function generator, multi-meter, etc.). Students record their experiment results and report back to the instructor. In some cases student may be asked to capture their work on video or still images.

Learning Outcomes
- Ability to apply advanced electrical engineering theory and methods to identify, formulate and solve advanced engineering problems.
- Ability to analyze and design an electrical system with constraints and specifications that consider other design factors such as societal, economic, and environmental influences.
- Proficiency in modern engineering tools to simulate and/or conduct experiments on complex electrical systems.
- Ability to present advanced technical contents effectively through various media.
- Ability to apply the deeper understanding gained from electives into focus area.

Skill Outcomes
- 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.
- Ability to identify, formulate, and solve Electrical Engineering problems.
- Ability to function in multidisciplinary teams.
- Capability to use state-of-art engineering/computer tools necessary for engineering practice.
- Skill to find and use available technical information.
Electrical Engineering, MS

Program Director
Prasanta K. Ghosh, 4-131 Center for Science and Technology, 315-443-4440, Fax: 315-443-2583; pkghosh@syr.edu.

Faculty

Master of Science Programs

The requirements for the M.S. emphasize mastery of a field of knowledge and some familiarity with allied areas. Programs are tailored to meet the needs of the individual with certain general restrictions set by the department. All degree candidates are required to take work of a basic nature in several fields to provide the necessary breadth of knowledge.

The M.S. programs consist of at least 30 credits beyond the B.S. degree. A thesis is optional. A maximum of 12 credits taken at Syracuse University are credited towards the M.S. degree, and a minimum GPA of at least a 3.0 in those courses to be accounted for.

The student must maintain a cumulative total GPA of at least a 3.0 in those courses to be credited towards the M.S. degree, and a minimum cumulative total GPA of 2.8 in all graduate courses taken at Syracuse University.

3. A Maximum of 9 Credits of Transfer Credit of Graduate Coursework

A maximum of 9 credits of transfer credit of graduate coursework taken at an other university with a grade of B or better may be included in M.S. programs.

4. A Maximum of 12 Credits Taken at Syracuse University

A maximum of 12 credits taken at Syracuse University before the semester of admission may be included in an M.S. program provided they are relevant to a program in electrical engineering and have a grade of B- or better.

5. Preliminary Program of Study

Late in the first semester, the student fills out a preliminary program of study. Early in a student’s final semester, a Program of Study must be submitted on forms available from the department. A Diploma Request Card must also be submitted at that time.

6. To Maintain Full-time Status in the EECS Department

To maintain full-time status in the EECS Department, students must register for 9 credits per semester. Part-time students must complete at least 6 credits per academic year.

7. Each student is required to take four required courses which are composed of:

- Ability to communicate effectively orally.
- Ability to communicate effectively in written reports.
- Skills to organize and synthesize information.
- Ability to design and conduct experiments, tests, or simulations, as well as analyze and interpret data to validate his/her assumptions and hypotheses.
- Ability to evaluate current electrical engineering techniques.

**Attitude Outcomes:**
- Recognition of the need and ability to engage in lifelong learning.
- Understanding of their professional and ethical responsibilities.
- An understanding of responsibility and accountability.
- A desire to be a flexible and adaptable team player.
- Recognition of the significance to be a self-grower.
- Showing mental robustness and accepting increasing challenges.

**Degree**

The M.S. in Electrical Engineering requires students to complete 30 total credits including 12 credits of core courses and 18 credits of electives.

**Transfer Credit**

A maximum of 9 transfer credits for students admitted to the online programs. Transfer credits are certified after the students complete their course work requirements. Upon completion of course work, the College forwards the necessary paperwork to the Graduate School, which certifies any transfer credits (as well as the credits completed with us) prior to graduation.

**Part-time Study**

The online MSCS program can be completed part-time.

**Satisfactory Progress**

The student must maintain a cumulative total GPA of at least a 3.0 in those courses to be credited towards the M.S. degree, and a minimum cumulative total GPA of 2.8 in all graduate courses taken at Syracuse University.

**Total Credits: 30**

The Master of Science in Electrical Engineering program consists of 30 credit hours to be earned over the course of 20 months. The curriculum will include 10 courses total comprising of 4 core courses, 3 700 or upper level courses and a choice of 3 electives.
One of the two engineering math courses:
- ELE 603 - Functional Methods of Engineering Analysis 3 credit(s)
- ELE 606 - Probabilistic Methods in Electrical Engineering 3 credit(s)

One course in electromagnetics:
- ELE 621 - Electromagnetic Fields 3 credit(s)

Digital Communications:
- ELE 651 - Digital Communications 3 credit(s)

One of the three courses:
- ELE 633 - Discrete and Integrated Analog Electronic Circuits 3 credit(s)
- ELE 635 - Digital Electronic Circuits 3 credit(s)
- ELE 643 - Theory of Semiconductor Devices 3 credit(s)

Additional Course Requirements
These courses represent the student’s core program and are to be taken as early as possible. In addition, students are required to complete stated prerequisites before enrolling in advanced courses. Responsibility for seeing that prerequisites are satisfied rests with the student.

8. Programs must include a minimum of 21 credits of ELE courses

9. Students may select a thesis option
Students may select a thesis option. For students choosing the thesis option, at least 3 credits must be from a 700 or higher level ELE course. For students choosing the non-thesis option, at least 9 credits must be from 700 or higher level courses, of which at least 6 credits must be ELE courses. Independent study courses may not be used to satisfy this requirement. Students must get prior approval to take courses from other programs/departments.

10. No more than 6 credits of 500-level courses may be included in the M.S. program

11. Preparation of Theses and Dissertations
The master's thesis must be prepared in accordance with the Graduate School’s instructions for the Preparation of Theses and Dissertations and must be approved by the thesis advisor. Theses must be presented orally and defended before a faculty panel.

12. Final Examinations
Candidates are required to complete the final examinations in all core courses with an average grade of B- or better.

13. Students May Select the Remaining Courses from the Graduate Offerings
Students may select the remaining courses from the graduate offerings of this or other departments, provided these courses have technical content appropriate to their M.S. program. In such cases students must request department approval prior to registering for these courses by completing a petition to the faculty.

14. Students Electing the Thesis Option
Students electing the thesis option must include ELE 997 - Masters Thesis (normally 6 credits) in their programs of study.

15. Students Who Do Not Hold a B.S. Degree in Electrical Engineering
Students who do not hold a B.S. degree in electrical engineering or a related field may be admitted to a 60-credit program. This program includes the following remedial undergraduate courses:

The following eight courses:
- ELE 231 - Electrical Engineering Fundamentals I
- ELE 232 - Electrical Engineering Fundamentals II
- ELE 291 - Electrical Engineering Laboratory I
- ELE 292 - Electrical Engineering Laboratory II
- ELE 346 - Semiconductor Devices
- ELE 331 - Digital Circuits and Systems
- ELE 324 - Electromagnetics I
- ELE 333 - Analog Circuits

One of the following two courses:
- ELE 351 - System and Signal Analysis or
- ELE 352 - Digital Signal Processing

At least two technical elective courses such as:
- ELE 416 - Electromechanical Devices
- ELE 424 - Transmission Lines for Computers and Communications
- ELE 425 - Microwave Engineering
- ELE 431 - Analog Circuits and Systems

- ELE 458 - Data Networks: Basic Principles
- ELE 512 - Linear Control Systems 3 credit(s)
- ELE 524 - Introduction to Applied Optics 3 credit(s)
- ELE 541 - Integrated Circuits 3 credit(s)
- ELE 551 - Communication Systems 3 credit(s)

Additional Information
In addition, students, depending on their background, may need to take remedial physics and mathematics courses.

Students who have demonstrated competence in any of the above subjects may request a waiver of the corresponding courses. The remedial coursework must be completed prior to registering for graduate courses. The remaining 30 credits must satisfy the requirements for the MSEE program.

Electrical Engineer Degree
The degree of electrical engineer allows qualified students to pursue their graduate education beyond the M.S. 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.

Admission Requirements
B.S. in electrical or computer engineering or a related field with an average of 3.0 or better on a scale of 4.0 from an accredited institution, or M.S. in electrical or computer engineering or a related field.

Applicants are informed of any additional requirements when their applications are processed.

Guidance
Each student is assigned a guidance committee to help plan the program of study.

Program Summary
The program consists of coursework, qualifying examinations, and a project. The minimum program consists of 60 credits beyond the B.S. including 6 credits for the Engineer Degree Project (ELE 995). The student must maintain at least a 3.0 average.

Required Courses
A student’s program must include the coursework required for the M.S. degree in electrical engineering, computer engineering, or an acceptable related area completed either at Syracuse University or elsewhere. In addition, the student must take at least 4 ELE/CSE courses at or above the 700 level beyond M.S. degree; Independent study courses may not be used to satisfy this requirement.
Qualifying Examinations

Students working toward an electrical engineer degree must pass the written qualifying examinations required for the Ph.D. Students are examined on basic undergraduate and graduate material in electrical engineering, computer engineering, and applied mathematics. The current list of areas and descriptions of the nature and scope of these examinations can be obtained from the department office. The examinations may not be taken more than twice. Credit granted for work at other approved institutions does not exempt a student from the qualifying examinations.

The Electrical Engineer Degree Project

ELE 995 - Engineer Degree Project ELE 995 carries 6 credits. The student undertakes an investigation which may be original research, an application of the state-of-the-art, a solution of a set of related problems, or a critical survey of a special topic. The student is assigned a project advisor who must approve the topic and agree to direct the work. Students with engineering employment may make arrangements to carry out the project work at the employer's premises or laboratory, provided the advisor has unrestricted access to the work. A formal project report and a final oral examination on the project are required after completion of all graduate work.

Energy Systems Engineering, MS

Contact:
Prof. H. E. Khalifa, hekhalif@syr.edu
462G Link Hall
Tel: 315-443-1286

Faculty


Description:
The MSESE prepares students for professional careers in energy systems engineering and research. The program covers fundamental and applied courses on the analysis, design, and optimization of thermo-mechanical, nuclear, renewable and electrical energy systems.

Admission Requirements

Admission to the M.S. degree program is granted on the basis of undergraduate preparation and performance, GRE scores, and letters of recommendation documenting the recent technical proficiency of the applicant. A grade-point average (GPA) of 3.0 or higher on a 4.0 scale (or equivalent), and a GRE Quantitative Reasoning score of 700 or higher (155 or higher on the new scale) are normally expected.

Admission to this M.S. degree program requires a Bachelor's degree in Engineering, or an acceptable field of Science.

If a student's background is not particularly strong in energy-relevant undergraduate subjects, such as thermodynamics, he/she may be required to take undergraduate courses (not counted towards the M.S. degree) as specified in the letter of admission.

General Requirements

A student seeking an MS Degree in Energy Systems Engineering (MSESE) must complete ten (10) 3-credit courses, no more than four (4) of which can be at the 500-level, the remainder must be at the 600-level or higher.

Required Core Courses

The following courses are required in this core:

- MAE 548 - Engineering Economics and Technology Valuation 3 credit(s)
- MAE 551 - Energy Conversion 3 credit(s)
- ECS 650 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s)
- ECS 629 - Modeling and Optimization Techniques 3 credit(s) or
- MAE 671 - Numerical Methods in Mechanical Engineering 3 credit(s)

MAE 671 - Methods of Analysis in Mechanical Engineering 3 credit(s); or CEN 671 - Chemical Engineering Methods I 3 credit(s)

Energy Systems Tracks

Select any 3 courses (9 credits) from one of the 3 tracks listed below:

Thermal Energy Track

- MAE 553 - HVAC Systems Analysis and Design 3 credit(s)
- MAE 554 - Principles of Refrigeration 3 credit(s)
- MAE 585 - Principles of Turbomachines 3 credit(s)
- AEE 685 / MEE 685 - Principles of Turbomachines 3 credit(s)
- CEN 542 - Heat and Mass Transfer Operations 3 credit(s)
- MAE 643 - Fluid Dynamics 3 credit(s)
- MAE 651 - Advanced Thermodynamics 3 credit(s) or
- CEN 651 - Chemical Engineering Thermodynamics 3 credit(s)

or

- CEN 741 - Transport Phenomena I 3 credit(s)
- MAE 655 - Advanced Heat Transfer 3 credit(s) or
- MAE 657 - Convective Heat and Mass Transfer 3 credit(s)
- MAE 658 - Building Environmental Modeling and Simulations 3 credit(s)
- MAE 659 - Building Materials and Envelope 3 credit(s)
- MEE 757 - Heat Exchange Systems 3 credit(s)
- MAE 765 - Combustion Phenomena in Engineering 3 credit(s)

Alternative Energy Track

- MAE 510 NUC 510 - Nuclear Reactor Design, Operation and Safety 3 credit(s)
- NUC 520 - Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation 3 credit(s)
- CEN 573 - Principles and Design in Air Pollution Control 3 credit(s)
- MAE 587 - Design of Solar Energy System 3 credit(s)
- MAE 588 - Principles of Wind Turbines 3 credit(s)
- CEN 662 - Biofuels, Bioproducts, and Biorefining 3 credit(s)
- MAE 686 - Advanced Fuel Cell Science and Technology 3 credit(s)

Electric Energy Track

- ELE 514 - Electric Power Systems 3 credit(s) or
- NUC 530 / ELE 530 - Electric Power Generation and Distribution 3 credit(s)
- ELE 691 - Special Topics in Electrical Engineering 1-4 credit(s) (Smart Grid) and
- ELE 691 - Special Topics in Electrical Engineering 1-4 credit(s) (Power Electronics)

Program Customization

Select 2 course (6 credits) from any of the MSESE Tracks listed above, (a track-related 3-credit Independent Study or Special Projects course may be substituted for 1 of the 2 courses). In addition, select 1 course (3 credits) from Architecture, Business/Management, Social Sciences (Economics, Public Policy...), or Engineering & Computer Science (ECS) Technical Elective (subject to the 500-level 4-course limit).

Additional Requirements

- MAE 995 - Graduate Seminar 0 credit(s)
- MAE 994 - Capstone Project 0 credit(s) - The student will review technical papers or reports in the literature related to the student's field of interest. The student will prepare an oral presentation summarizing the technical content of the documents reviewed, and present his/her findings before a faculty committee. A
hard copy of the presentation, signed by the student advisor, must be submitted to the MAE Graduate Office before the oral presentation.

Suggested Sequence of Courses

Fall, Year-1:(9 credits):
- MAE 548 - Engineering Economics and Technology Valuation 3 credit(s)
- MAE 551 - Energy Conversion 3 credit(s)
- MAE 600 or
- Two Energy Systems Track Elective 6 credit(s)
- MAE 995 - Graduate Seminar 0 credit(s)

Spring, Year-1:(9 credits)
- ECS 650 - Managing Sustainability 3 credit(s)
- ECS 629, MAE 671, MAE 675, CEN 671
- MAE 551 - Energy Conversions 3 credit(s)
- MAE 995 - Graduate Seminar 0 credit(s)

Summer, Year-1 (Optional):
A student may take a Management/Business course, Social Sciences course, or an ECS Technical Elective, if offered in the summer (possible 3 credits).

Year-2:
Remaining Electives and 0-credit MAE 994 -Capstone Project on an energy-focused topic, plus MAE 995 - Graduate Seminar (0 credits).

Total Credits Required: 30 + a 0-credit capstone project on energy related topic.

Degree Awarded:
Master of Science in Energy Systems Engineering

Transfer Credit:
None

Part-time Study:
Yes

Satisfactory Progress:
3.0 GPA or higher

Engineering Management, MS
The program leading to the Master of Science degree in Engineering Management (MSEM) is interdisciplinary. It is administered by the Department of Mechanical and Aerospace Engineering, and the College of Engineering and Computer Science, with the cooperative support of the Martin J. Whitman School of Management.

The MSEM degree program is designed for practicing engineers and scientists who have or seek increased managerial and leadership responsibilities. The degree program provides a balanced field of knowledge in engineering management theory and practices, statistics, quality control, finance, economics, information/data management, and legal issues. With proper selection of courses, technical competence in a particular area can be strengthened as well. Course electives can be chosen to customize your program of study to meet specific career goals.

At least 18 credit-hours (6 courses) must be at 600 level or above. The program consists of a set of 5 required core courses (15 credits), a set of 4 courses (12 credits) in engineering management specialization (three of the four courses must be from the same track), and 2 elective courses (6 credits) in engineering and computer science.

Completion of the program with less than 24 semester credits in engineering does not lead to credit towards licensure.

For more information, contact Frederick Carranti, Engineering Management Program, 263 Link Hall, Syracuse University, Syracuse NY 13244-1240; 315-443-4346 or 315-443-4367, carrantil@syr.edu.

Core Requirements
- ECS 526 - Statistics for Engineers 3 credit(s)
- MAE 548 - Engineering Economics and Technology Valuation 3 credit(s)
- ECS 630 - Simulation and Data Analytics 3 credit(s)
- SCM 656 - Project Management 3 credit(s)
- EEE 630 - Entrepreneurship in Engineering and Science 3 credit(s)

Management Specialization
Tracks
Student has to select 3 courses (9 credits) from one of the following 4 tracks, plus 1 course (3 credits) from any of the 4 tracks. (These tracks are regularly reviewed and may be revised by the program committee).

Track 1: Operations
- CIE 601 - Construction Engineering and Project Management 3 credit(s)
- MFE 634 - Productivity and Quality Engineering 3 credit(s)
- MFE 654 - Production System Design and Control 3 credit(s)
- SCM 721 - Supply Chain Systems 3 credit(s)
- SCM 755 - Lean Six Sigma 3 credit(s)

Track 2: Entrepreneurship
- ECS 511 - Sustainable Manufacturing 3 credit(s)
- EEE 621 - Corporate Entrepreneurship 3 credit(s)
- EEE 625 - Venture Capital 3 credit(s)
- LAW 726 - Intellectual Property 3 credit(s)
- MBC 603 - Creating Customer Value 1.5 credit(s) or
- MBC 604 - Managing the Marketing Mix 1.5 credit(s)

Track 3: Informatics
- CIS 787 - Analytical Data Mining 3 credit(s)
- CSE 581 - Introduction to Database Management Systems 3 credit(s)
- CSE 682 - Software Engineering 3 credit(s)
- SCM 651 - Business Analytics 3 credit(s)

Track 4: Sustainability
- CIE 636 - Plstc Des/Steel Strctures 3 credit(s)
- CIE 663 - Introduction to Sustainable Engineering 3 credit(s)
- ECS 511 - Sustainable Manufacturing 3 credit(s)
- ECS 650 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s)
- ECS 651 - Strategic Management and the Natural Environment 3 credit(s)

Environmental Engineering Science, M.S.

Department Chair:
Dr. Ossama “Sam” Salem, 151 Link Hall, osmsalem@syr.edu, 315-443-2311

Program Director:
Dr. Cliff I. Davidson, 151 Link Hall, davidson@syr.edu, 315-443-2311.

Environmental Engineering Science Faculty

Program Description
The graduate program in environmental engineering science at Syracuse has earned a reputation for superior quality. Degree recipients working in government, industry, and education have made important contributions to the profession. The environmental engineering science
program provides coursework and research opportunities in environmental chemistry, water and wastewater treatment, applied microbiology, hydrology and water resources, sustainability, groundwater remediation, and green water infrastructure.

In addition to these focus areas, the students and faculty in environmental engineering science engage in interdisciplinary teaching and research, expanding the opportunities available to graduate students. The Department is home to the Center for Environmental Systems Engineering, which serves faculty in environmental, chemical, and mechanical engineering with a shared interest in environmental systems. We also engage in joint teaching with faculty in the School of Architecture and at SUNY-ESF.

Admission Requirements

B.S. in engineering, mathematics or a natural science from an accredited institution. Candidates with undergraduate degrees in other fields must have their programs evaluated to determine if additional undergraduate courses are to be included in their program of study.

At least a 3.0 in a 4.0 rating system or equivalent in B.S. program coursework.

Satisfactory scores on all required graduate entrance examinations. A TOEFL score of 80 or higher is required for international students.

Departmental approval.

Program Requirements

The M.S. in environmental engineering science is intended for students with science-based undergraduate degrees in fields other than engineering. Students with undergraduate degrees in other professional and liberal arts disciplines may be required to complete undergraduate courses to prepare themselves for M.S. coursework. These courses will be specified in the student's letter of admission and may not carry credit toward the M.S. degree.

Programs are planned by the students in consultation with their advisors. At least half of the coursework must be at or above the 600 level. Students who have taken the lower level of a double-numbered course (e.g., a course offered at the 400 and 600 levels) may not take the higher level of the same course for credit.

M.S. candidates may transfer a maximum of 6 credits from other institutions. They are expected to complete their entire program within five calendar years of their admission.

Thesis and non-thesis options are available. Students anticipating further graduate study at the doctoral level should pursue the thesis option.

Requirements with Thesis (30 credits)

1. Completion of:
   - CIE 671 - Environmental Chemistry and Analysis 3 credit(s)
   - CIE 672 - Applied Env Microbiology 3 credit(s)
   - CIE 997 - Masters Thesis 0-6 credit(s)
   - CIE 997 - Masters Thesis 0-6 credit(s)
   - CIE 997 - Masters Thesis 0-6 credit(s)

Program Description

The graduate program in environmental engineering at Syracuse has earned a reputation for superior quality. Degree recipients working in government, industry, and education have made important contributions to the profession. The environmental engineering program provides coursework and research opportunities in environmental engineering, chemical engineering, water and wastewater treatment, applied microbiology, hydrology and water resources, sustainability, groundwater remediation, and green water infrastructure.

In addition to these focus areas, the students and faculty in environmental engineering science engage in interdisciplinary teaching and research, expanding the opportunities available to graduate students. The Department is home to the Center for Environmental Systems Engineering, which serves faculty in environmental, chemical, and mechanical engineering with a shared interest in environmental systems. We also have a collaborative degree program with the Maxwell School of Citizenship and Public Affairs, and we engage in joint teaching with faculty in the Whitman School of Management, and at SUNY-ESF.

Admission Requirements

B.S. in an engineering discipline or the equivalent from an accredited institution. Candidates with undergraduate degrees in another field must have their programs evaluated to determine if additional undergraduate courses are to be included in their program of study.

At least a 3.0 in a 4.0 rating system or equivalent in the B.S. program coursework.

Satisfactory scores on all required graduate entrance examinations. A TOEFL score of 80 or higher is required for international students.

Departmental approval.

Program Requirements

The M.S. in environmental engineering is intended for students with undergraduate engineering degrees. Students without an undergraduate degree appropriate to their chosen M.S. program will be required to complete undergraduate courses to prepare themselves for M.S. coursework. These courses will be specified in the student's letter of admission and may not carry credit toward the M.S. degree.

Programs are planned by the students in consultation with their advisors. At least half of the coursework must be at or above the 600 level. Students who have taken the lower level of a double-numbered course (e.g., a course offered at the 400 and 600 levels) may not take the higher level of the same course for credit.

M.S. candidates may transfer a maximum of 6
Credits from other institutions. They are expected to complete their entire program within five calendar years of their admission.

Thesis and non-thesis options are available. Students anticipating further graduate study at the doctoral level should pursue the thesis option.

Requirements with Thesis (30 credits)
1. Completion of:
   • CIE 642 - Treatment Processes in Environmental Engineering 3-4 credit(s)
   • CIE 671 - Environmental Chemistry and Analysis 3 credit(s)
   • CIE 672 - Applied Env Microbiology 3 credit(s)
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile, available in the department office.
3. Complete Master's Thesis for 6 credits
   • CIE 997 - Masters Thesis 0-6 credit(s)
4. Defense of thesis
5. Participation in the Faculty/Student Seminar Program

Requirements without Thesis (30 credits)
1. Completion of:
   • CIE 642 - Treatment Processes in Environmental Engineering 3-4 credit(s)
   • CIE 671 - Environmental Chemistry and Analysis 3 credit(s)
   • CIE 672 - Applied Env Microbiology 3 credit(s)
2. Elective coursework satisfying distributional requirements, as specified in the Graduate Program Profile, available in the department office.
3. Complete one of the following:
   • CIE 600 - Environmental Assessment 3 credit(s)
   • CIE 996 - Master's Project 3 credit(s) The Master's project must address a topic in environmental engineering or environmental science and be approved by the advisor and at least one additional reader.
   • CIE 995 - Master's Exit Paper 0 credit(s)
   • one additional elective course (3 credits)
4. Participation in the Faculty/Student Seminar Program
   • CIE 660 - Seminar Civil Engineering 0 credit(s)
The Master's project must address a topic in environmental engineering or environmental science and be approved by the advisor and at least one additional reader.
The exit paper must address a topic in environmental engineering or environmental science. The paper can be original research work or it can be a critical review of a published journal article. The paper has a minimum length of 2000 words and requires approval of the student’s advisor.

Mechanical and Aerospace Engineering, MS

Chair:
Young Bai Moon, 263 Link Hall, 315-443-2341; fax: 315-443-9099, gradinfo@syr.edu.

Faculty:
Jeongmin Ahn; Benjamin Akih-Kumghen;

The Department of Mechanical and Aerospace Engineering offers graduate programs leading to the following degrees:
• Master of Science (M.S.) in Mechanical and Aerospace Engineering
• Doctor of Philosophy (Ph.D.) in Mechanical and Aerospace Engineering
It also oversees two interdisciplinary master programs leading to the following degrees:
• Master of Science (M.S.) in Engineering Management
• Master of Science (M.S.) in Energy Systems Engineering

Admission Requirements

Master of Science (M.S.) in Mechanical and Aerospace Engineering

Admission to the M.S. program is granted on the basis of undergraduate preparation and performance, GRE scores, and letters of recommendation documenting the recent technical proficiency of the applicant. A grade-point average (GPA) of 3.0 or higher on a 4.0 scale (or equivalent), and a GRE Quantitative Reasoning score of 700 or higher (155 or higher on the new scale) are normally expected.

Admission to this M.S. degree program requires a Bachelor's degree in Engineering, or an acceptable field of Science.

If a student’s background is not particularly strong in the basic sciences required for a successful pursuit of this degree (e.g., university-level chemistry; university-level-calculus-based physics; three (3) semesters of university-level mathematics, including calculus, linear algebra and differential equations; thermodynamics), s/he may be required to take undergraduate courses (not counted towards the M.S. degree) as specified in the letter of admission.

Completion of the program with less than 24 semester credits in engineering does not lead to credit towards licensure.

Application Procedure

Online application is the preferred method of applying to graduate programs at Syracuse University. Applications submitted online can be processed faster and more efficiently than those filed on paper. Access the online application.

You will receive an e-mail or postcard from Syracuse University when your application has been received and processed. Find out more information on the application process.

Course Requirements

Graduate courses can be found in the Course Catalog (http://coursecatalog.syr.edu), using the search engine.

The course of study toward an MSESE consists of three components, subject to the restriction on the number of 500 level courses. The specific requirements of each are listed below:

Required Core Courses (12 credits)
The following courses are required in this core:
• MAE 548 -Engineering Economics andTechnology Valuation 3 credit(s)
• MAE 551 -Energy Conversion 3 credit(s)
• ECS 629 -Modeling & Optimization Techniques 3 credit(s) or MAE 671 -Numerical Methods in Mechanical Engineering 3 credit(s) or MAE 675 -Numerical Methods in Mechanical Engineering 3 credit(s) or CEN 671 -Chemical Engineering Methods I 3 credit(s)
• ECS 650 -Managing Sustainability 3 credit(s)

Energy Track Courses (9 credits)
The student must select 3 courses (9 credits) from one of the following three tracks: Thermal Energy, Alternative Energy, or Electric Energy.
Courses comprising each of these tracks include:

**Thermal Energy (select 3 of the following courses)**
- MAE 553, MAE 554, MAE 585, CEN 542, MAE 651, or CEN 651, MAE 643, MAE 655 or MAE 657, MAE 658, MAE 659, MAE 757, MAE 765, and others to be announced.

**Alternative Energy Track (select 3 of the following courses)**
- MAE 510, NUC 520, MAE 587, MAE 588, BEN 662 (Biofuels), MAE 686 (Fuel Cells), and others to be announced.

**Electric Energy Track (select 3 of the following courses)**
- ELE 514, ELE 530, ELE 691, and others to be announced.

**Program Customization Courses (9 credits)**
Select 2 courses (6 credits) from any of the above tracks plus 1 course (3 credits) from Business/Management, Social Sciences, or a Technical Elective.

**Other requirements**
The student is required to complete an energy-focused, zero-credit capstone project report (MAE 994) approved by the adviser, as well as attend three (3) semesters of graduate seminars, e.g., MAE 995 (0 credits). The capstone project must address issues of energy sources, conversion and utilization, or the environmental and economic impacts of energy. The project can be based on original work or a critical review of a recent paper published in an archival journal. If the critical review option is selected, a copy of the paper being reviewed must be included with the capstone report.

**Note:**
[1] Of the 48-credit course work, 30 credits should be equivalent to our M.S. degree requirements.

Part-time M.S. students may petition the Graduate Affairs Committee for partial exemption from seminar attendance.

**Public Health, MPH**
Michael Wasylenko, Ph.D., Senior Associate Dean, Maxwell School
200 Eggers Hall; 315-443-2253; mjwasyle@maxwell.syr.edu
www.upstate.edu/cnymph

**Program Requirements**
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, College of Engineering and Computer Science, the College of Law and the David B. Falk College of Sport and Human Dynamics.

The program is designed to prepare students in the basic knowledge areas in public health through a core curriculum of required courses; extend that knowledge through elective coursework and through practical skills honed in field experiences; and demonstrate an integration of that knowledge through a culminating experience. The basic knowledge areas include: biostatistics, epidemiology, environmental health, health policy and management and social and behavioral sciences. A minimum of 42 credits is required for the degree, consistent with the accreditation criteria for public health programs promulgated by the Council on Education for Public Health.

The M.P.H. student body consists of individuals with a variety of backgrounds and preparations, including students directly out of undergraduate school with a relevant baccalaureate degree as well as professionals with graduate degrees and significant work experience in public health administration or clinical care. Students will be prepared for career opportunities in public health administration, leadership roles in private agencies involved in public health delivery and advocacy, research, and clinical care broadened by an understanding of the health care delivery system and grounded in public health practice.

**Admission**
Students interested in the M.P.H. must complete an application online at:
http://www.upstate.edu/cnymph/academic/mph_degree/how_to_apply.php

**Bioengineering, PhD**

**Department Chair:**
Radhakrishna Sureshkumar
329 Link Hall
315-443-1931; fax: 315-443-9175

**Faculty**
Rebecca Bader, Jesse Q. Bond, Katie D. Cadwell, Ruth Chen, Mandy B. Esch[1], Jeremy L. Gilbert, Julie M. Hasenwinkel, James H. Henderson, Ian Hosein, George C. Martin, Patrick T. Mathes, Shikha Nangia, Dacheng Ren, Ashok Sangani, Pranav Soman, Radhakrishna Sureshkumar, Lawrence L. Tavlarides, Angela Zachman

**Adjunct/Research Faculty:**
Jürgen Babirad, Gino Duca, Bart Farrell, Eric Finkelstein, Shelley Stephens, Kent Ogden, David Quinn, Dana Radcliff, Suresh Santanam, Fred Werner

**Affiliate Faculty:**
Joseph Chaiken, Andria Costello Staniec, Martin Forstner, Yan-Yeung L. Kung, Juntao Luo, Cristina Marchetti

**Emeritus Faculty:**
Gustav Engbrecht, John Heydweiller, Philip Rice, Klaus Schroder, Robert L. Smith, S. Alexander Stern, Chi Tien, Josef Zwislocki

**Graduate Bioengineering Program Director:**
James Henderson, 318 Bowne Hall, 315-443-9739; jjhender@sy.edu

The Department of Biomedical and Chemical Engineering offers a comprehensive set of graduate programs in bioengineering and chemical engineering, including master’s of science (MS) degrees and doctor of philosophy (PhD) degrees. Graduates of these programs work in the medical profession, the biomechanics and bioinstrumentation industries, the chemical engineering industry, the government, and in education.

The graduate program in bioengineering provides a wide range of opportunities for advanced study in this interdisciplinary field. This graduate program is linked with and focused on research programs in biomaterials and tissue engineering; biomechanics; orthopedic biomechanics; cardiac bioengineering; and neural engineering. Which degree to consider depends on one’s career goals.

Major research laboratories include the Syracuse Biomaterials Institute, the Institute for Human Performance, and laboratories at nearby SUNY Upstate Medical University. Strong collaboration between Upstate Medical University and Syracuse University faculty, and staff provides opportunities for bioengineering research in clinical and basic science departments at Upstate, as well as in-depth study at one of the Syracuse University bioengineering research centers.

**Major Requirements**
The Doctor of Philosophy (PhD) is a research-based degree program involving a high level of training in advanced bioengineering. A dissertation consisting of original research in a specialty area within the bioengineering program is required. A minimum of 42 credit hours is required for the completion of the PhD degree. No dissertation credits are required. A student entering the PhD program with an MS degree may apply up to 30 credits toward the required coursework, with the approval of the program director. A minimum of three years of graduate study is required and students typically complete all requirements within five years.

The requirements for the PhD degree in Bioengineering are:
- 42 total credits including:
- at least 36 credits of coursework;
• 15 credits of Bioengineering (BEN) courses,
• 3 credits of ethics, and
• 18 credits of technical electives, to be chosen in consultation with the dissertation advisor
• 6 credits of thesis (transferable from the MS) or additional technical electives.
• successful completion of qualifying and candidacy examinations;
• no more than 33.3% of coursework at 500-level;
• a minimum GPA of 3.0 for the set of courses included on the Program of Study;
• a minimum GPA of 2.8 for all credits earned;
• student must complete a dissertation and defend it in an oral examination, but no dissertation credits are required.

Required coursework can include Independent Study credits. Those entering the program post-BS degree can take up to 6 credits. Those entering the program, post-MS degree, can take up to 3 credits. The independent study cannot be supervised by the dissertation advisor. Note: A student must be enrolled for at least three academic years of full-time graduate level study beyond the baccalaureate degree.

PhD Exams and Timing:

All PhD students must pass a Qualifying Exam and a Dissertation Proposal Defense/Candidacy Examination. The timing of these exams differs depending upon what path a student takes through the various degree programs, as explained in this section.

Qualifying Examination:

Students who enter the PhD program with a BS are required to take the PhD Qualifying Examination within the 1st month of the 4th semester of study. Students who enter the PhD program with an MS degree are required to take the Qualifying Examination within the 1st month of the beginning of the 3rd semester of study.

The Qualifying Examination is based on the student’s critical analysis and study of a research topic that is outside of, but related to, the student’s planned dissertation research area. The student is expected to critically analyze a published journal article, assigned by the faculty. The chair of the examination committee assigns the journal article, in consultation with the entire examination committee and the student’s advisor. A written report of not more than 15 pages must be provided to the examination committee at least two weeks prior to the oral examination.

A committee consisting of at least three tenured or tenure-track BMCE faculty, appointed by the Bioengineering Graduate Program Director, evaluates the student’s performance based on the technical content and quality of the written report and the students’ presentation and ability to answer questions in the oral examination. The outcome of the oral examination will be communicated to the student by the committee at the time of the examination. After the examination has been completed, the student’s eligibility to pursue the PhD is decided by the faculty of the Department on the basis of the student’s performance on the examination, the student’s academic record, and the student’s progress in his/her research. The decision to continue to candidacy will be communicated to the student after the faculty vote.

Dissertation Proposal Defense/ Candidacy Examination:

All PhD students must defend their Dissertation Proposal within one calendar year of passing the Qualifying Examination. Several months before the Dissertation Proposal Defense/Candidacy Examination, the student should recruit faculty members to serve on a committee for that purpose. The committee membership should be essentially the same as the ultimate Oral Defense committee (see below), except that the outside Chair is not necessary for this defense/examination. The committee must have at least five members, including the dissertation advisor, at least three of which must be BMCE tenured or tenure-track faculty members. The student must obtain a Candidacy Examination Form from the Graduate Secretary and submit this form to the Department in order to schedule the examination. The form must include the title and abstract of the proposal, names of the committee members, and the advisor’s signature. The Graduate Program Director’s signature is also required, effectively assigning the committee. The Program Director also assigns a chair for the committee.

Proposal:

Candidacy Examination Form: Student must obtain this form from the Graduate Secretary and submit it to the Secretary in order to schedule the examination. This must be done at least two weeks before the examination is to be held. This form must include the title and abstract of the proposal, names of the committee members, and the advisor’s signature. The Graduate Program Director’s signature is required, effectively assigning the committee. The Program Director also assigns a committee chair for the examination.

Proposal: A written proposal must be circulated to the committee no later than 2 weeks prior to the examination. The student should ask the committee members if a hard-copy or electronic copy is preferred. The proposal is limited to 15 pages, single-spaced, Times New Roman 12 pt. font, with at least 1 inch margins in all directions. Page limit includes all figures and tables. Additional pages are only allowed for references. No appendices may be included. Any proposal that does not meet these requirements will be returned for revision before it can be accepted for review. Students should discuss the content of the proposal with their advisors. As a general guideline, the proposal may include the following: Introduction, Hypothesis (or motivating need if it is not a hypothesis-driven project), Research Objectives, Work done to Date, and Research Plan.

The examination is open to all faculty members and students. After the presentation, the committee meets in executive session and votes. The student is informed of the result of this vote immediately afterward. The committee prepares a Candidacy Examination Outcome Form. This form includes the dates of the examination, the names of all committee members, the results of the committee votes, and whether or not the student passes the examination. It is signed by the examination committee chair. The student receives a copy of this form, with the original retained in the student’s records. Upon successful completion of the Dissertation Proposal/Candidacy Examination, the student enters candidacy for the doctoral program.

Oral Dissertation Defense:

The Oral Dissertation Defense and submission of the dissertation document to the Syracuse University Graduate School and Department are the final requirements of the PhD program. All students are required to submit two copies of the final version of the dissertation, with the signed title page, to the Department in fulfillment of the requirements for the PhD degree. Defenses must comply with the requirements of the Graduate School as described elsewhere in this Graduate Course Catalog. The Oral Defense Committee consists of six members, including a Chair (must be a tenured or tenure-track faculty member from outside the Department, the advisor, and four other tenured or tenure-track faculty members, some of whom may be from outside the University, if appropriate. If a proposed committee member is not a full-time or adjunct faculty member at Syracuse University (i.e. from SUNY-ESF, Upstate Medical University, etc.), the student must petition the Department to allow this person to serve as a committee member. Students must submit a Request for Examination Form to the GEMC at least three full weeks prior to the oral defense. The dissertation document must be delivered to the Oral Defense Committee at least two weeks prior to the date of the oral defense.

CURRENT RESEARCH AREAS - Bioengineering and Chemical Engineering

- Biomaterials & Tissue Engineering
- Catalysis & Reaction Engineering
- Complex Fluids, Soft Matter & Rheology
- Corrosion and Electrochemistry
- Drug Delivery
- Molecular Biotechnology
- Multiscale Modeling and Simulation
- Nanotechnology
- Sustainable Energy Production
- Systems Biology/Metabolic Engineering

Chemical Engineering, PhD

Department Chair:
PhD in Chemical Engineering

The Doctor of Philosophy (PhD) in Chemical Engineering is designed for students interested in research and teaching. The program of study consists of coursework, a qualifying examination, a candidacy examination, and preparation and defense of the dissertation. A student entering the PhD program with a MS degree may apply up to 30 credits toward the required coursework, with the approval of the program director. A minimum of three years of graduate study is required.

The requirements for the PhD degree in Chemical Engineering are:

- 42 total credits, including at least 24 credits in chemical engineering (CEN);
- successful completion of qualifying and candidacy examinations;
- no more than 33.3% of coursework at 500-level;
- a minimum GPA of 3.0 for the set of courses included on the Program of Study and a 2.8 overall GPA;
- a minimum GPA of 2.8 for all credits earned;
- student must complete a dissertation and defend it in an oral examination; no dissertation credits are required.

Required coursework can include Independent Study credits. Those entering the program post-BS degree can take up to 6 credits. Those entering the program, post-MS degree, can take up to 3 credits. The independent study cannot be supervised by the dissertation advisor.

Note:
A student must be enrolled for at least three academic years of full-time graduate level study beyond the baccalaureate degree.

PhD Exams and Timing:
All PhD students must pass a Qualifying Exam and a Dissertation Proposal Defense/Candidacy Examination. The timing of these exams differs depending upon which path a student takes through the various degree programs, as explained in this section.

Qualifying Examination:
Students who enter the PhD program with a BS degree are required to take the PhD Qualifying Examination within the 1st month of the 4th semester of study. Students who enter the PhD program with an MS degree are required to take the Qualifying Examination within the 1st month of the beginning of the 3rd semester of study.

The Qualifying Examination is based on the student's critical analysis and study of a research topic that is outside of, but related to, the student's planned dissertation research area. The student is expected to critically analyze a published journal article, assigned by the faculty. The independent study cannot by supervised by the dissertation advisor.

Proposal:
A written proposal must be circulated to the committee no later than 2 weeks prior to the examination. The student should ask the committee members if a hard-copy or electronic
Bioengineering and Chemical Engineering

Current Research Areas

- Biomaterials & Tissue Engineering
- Complex Fluids, Soft Matter & Rheology
- Catalysis & Reaction Engineering
- Corrosion and Electrochemistry
- Drug Delivery
- Molecular Biotechnology
- Multiscale Modeling and Simulation
- Nanotechnology
- Sustainable Energy Production
- Systems Biology & Metabolic Engineering

Civil Engineering, Ph.D.

Department Chair
Dr. Osamma “Sam” Salem, 151 Link Hall, omsalem@syr.edu, 315-443-2311

Program Director:
Dr. Dawit Negussey, 151 Link Hall, negussey@syr.edu, 315-443-2311

Civil Engineering Faculty

Oral Dissertation Defense:
The Oral Dissertation Defense and submission of the dissertation document to the Syracuse University Graduate School and Department are the final requirements of the PhD program. All students are required to submit a copy of the final version of the dissertation, with the signed title page, to the Department in fulfillment of the requirements for the PhD degree.

Defenses must comply with the requirements of the Graduate School as described elsewhere in this Graduate Course Catalog. The Oral Defense Committee consists of six members, including a Chair (must be a tenured or tenure-track faculty member from outside the Department, see website above), the advisor, and four other tenured or tenure-track faculty members, some of whom may be from outside the University, if appropriate. If a proposed committee member is not a full-time or adjunct faculty member at Syracuse University (i.e. from SUNY-ESF, Upstate Medical University, etc.), the student must petition the Department to allow this person to serve as a committee member.

Students must submit a Request for Examination Form to the GEMC at least three weeks prior to the oral defense. The dissertation document must be delivered to the Oral Defense Committee at least two weeks prior to the date of the oral defense.

Current Research Areas

- Bioengineering and Chemical Engineering
- Biomaterials & Tissue Engineering
- Complex Fluids, Soft Matter & Rheology
- Catalysis & Reaction Engineering
- Nanotechnology
- Systems Biology & Metabolic Engineering

Admission Requirements

B.S. in Civil Engineering or other acceptable field from an accredited institution.
M.S. degree from an accredited institution.
B+ average in M.S. program coursework.
Satisfactory grades on all required graduate entrance examinations. A TOEFL score of 80 or higher is required for international students.
Departmental approval.
Demonstrated potential for excellent research work.

Advising

The candidate, with advice from the department chair and/or the program director, selects a dissertation advisor, whose consent must be obtained. The candidate and the advisor, together with consent from the department chair, select the members of the examination and dissertation committees. The candidate, in consultation with the advisor and dissertation committee, selects a program of coursework appropriate to the research and scholarly interests of the student.

Course Requirements

Ph.D. students are required to take a minimum of 48 credit hours of coursework beyond the B.S. level, or at least 18 credit hours of coursework beyond the M.S. level.

For students with an M.S. degree, at least two-thirds of the Ph.D. coursework must be at or above the 600 level, and no more than one-third of the coursework can be independent study (CIE 690).

Ph.D. students are required to maintain an average GPA of B+ (3.33) in all Ph.D. coursework, and they are required to participate in the faculty/student seminar program (CIE 660).

Examinations

1. Qualifying Examination:
The qualifying examination is to be conducted within the first year of enrollment in the Ph.D. program. The examination is composed of two parts: a written exam followed by an oral examination covering materials from at least three graduate-level classes that the student has taken at Syracuse University, as well as relevant materials from undergraduate coursework. The purpose of this examination is to assess the student’s background knowledge in his/her primary subject area(s) and his/her preparedness for Ph.D. level research. The exam committee shall consist of at least three faculty members. The majority of the committee membership shall be faculty members from the Department of Civil and Environmental Engineering at Syracuse University.
The result of this examination is a decision by the exam committee as to whether or not the student should continue in the Ph.D. program. For the candidate to pass this examination, a majority of the committee must vote favorably. If the student does not pass this examination, he/she can request to retake the examination one more time in the following semester. In the event that the student fails the examination for the second time, his/her Ph.D. program of study will be terminated.

2. Candidacy Examination:
This examination is conducted in the semester after completion of the student’s Ph.D. coursework, but no later than the fifth semester after admission into the Ph.D. program. Prior to this examination, the student shall prepare a detailed research proposal that includes, but is not limited to a review of relevant literature leading to a statement of objectives (including major questions or hypotheses to be addressed in the dissertation), a description of methods and approaches to be used, and a brief description of the significance of the proposed work. The proposal will often include preliminary results from the student’s work to date.

The candidacy examination is an oral exam and is presided over by a dissertation committee composed of at least five members. The majority of the committee membership shall be faculty members from the Department of Civil and Environmental Engineering at Syracuse University. This committee will follow the student’s work through his/her Ph.D. dissertation defense. Students are required to deliver their research proposals to all dissertation committee members and notify the department graduate secretary of the examination time and place at least two weeks prior to the exam. Any committee member who receives the proposal less than 14 calendar days prior to the examination may ask the department chair for a postponement of the examination.

The norm for the duration of the examination, which is open to all department faculty members, is two hours. The oral examination is initiated by a 30-40 minute summary of the dissertation research proposal and progress to date by the student. Following the presentation, the dissertation committee and department faculty ask the student questions concerning the research proposal. Following the examination, the dissertation committee confers to determine if the student is a suitable Ph.D. candidate based on his/her performance on the candidacy examination, as well as to determine if the student should be required to take additional coursework beyond the minimum required for the degree. If the student successfully completes the candidacy examination by receiving an affirmative vote from the majority of the committee, the advisor notifies the student and the graduate school and the student is considered a Ph.D. candidate. If the student does not successfully complete the candidacy examination, the committee determines whether the student will be permitted to retake the examination after a minimum period of six months or whether the student’s Ph.D. program should be terminated.

3. Dissertation Defense:
The final phase of the Ph.D. program is the dissertation defense. The doctoral dissertation is a summary of all phases of the student’s research endeavor. The final stage in the preparation of this dissertation is its distribution to all members of the dissertation committee. The student should not distribute the final draft of the dissertation until the advisor is satisfied with it. Readers should be presented with a polished draft that has been proofread, paginated, and contains professional quality tables and figures with captions. All members of the dissertation committee must be given at least two weeks to review the dissertation before the defense. Any committee member who receives the thesis less than 14 calendar days prior to the defense may ask the Exam Committee chair/Graduate School for a postponement of the defense.

When the Ph.D. candidate has completed a dissertation that has been approved by his/her advisor, a copy is to be provided to each of the dissertation committee members and a defense date is scheduled. The dissertation defense is an open examination and all members of the University community are invited. This is accomplished by announcements to students and faculty in the department at least one week in advance of the defense, as well as a notice in The Syracuse Record.

The dissertation defense is to be conducted in accordance with University Policies and Procedures for Dissertation and Oral Examination. The norm for the duration of the dissertation defense is two hours. The dissertation defense is usually initiated with a 30-40 minute summary of the research conducted. This is followed by open questioning from the audience. When this is completed, the candidate is questioned by the dissertation committee members. For the candidate to pass the dissertation defense, a majority vote on the quality and originality of the research, the quality of the dissertation, and the performance of the candidate at the examination is required.

Department of Civil and Environmental Engineering
Current Research Areas

- Accelerated and Fast Track Construction Lean and Green Construction
- Anchor foundations
- Application of geosynthetics in dewatering and containment
- Application of geosynthetics in dewatering and containment
- Applications of molecular biology to environmental engineering
- Applied environmental microbiology
- Applied surface chemistry
- Aquatic chemistry
- Biogeochemistry
- Bioremediation
- Bridge retrofit with CFRP composites
- Changes in microbial communities in response to anthropogenic disturbance
- Composite and hybrid systems
- Construction Project Management
- Construction Safety and Health
- Decentralized treatment processes
- Earthquake engineering
- Economy of preventive maintenance of highway bridges
- Environmental geostatistics
- Experimental investigation of structural concrete and steel systems
- Fiber optic sensors
- FRP reinforced concrete structural systems
- Geotechnical engineering
- Global biogeochemical cycles
- Green materials for contaminants removal and containment
- In situ testing
- Infrastructure Asset Management
- Investigation of structural failures
- Microbial fuel cell technologies
- Microstructure of soil and geosynthetics
- Microstructure of soil and geosynthetics
- Natural and polymeric fibers in soil erosion mitigation
- Natural and polymeric fibers in soil erosion mitigation
- Natural organic matter
- Nonlinear structural theories
- Numerical modeling
- Potable water supply
- Properties and applications of geofoams
- Renewable hydrogen production
- Resource recovery from wastewater
- Slurry wall containment systems and movement of organics in soil/rock systems
- Slurry wall containment systems and movement of organics in soil/rock systems
- Soil chemistry
- Solid-liquid separation processes
- Steel structures
- Structural dynamics
- Structural rehabilitation of civil infrastructure
- Structural stability
- Sustainable Infrastructure Systems
- Transportation Engineering
- Water quality modeling
- Women in science and engineering

Computer & Information
Science & Engineering, PhD

Faculty


Doctor of Philosophy Programs

The Department of Electrical Engineering and Computer Science (EECS) in the College of Engineering and Computer Science at Syracuse University offers Ph.D. degrees in computer and information science and engineering (CISE) and in electrical and computer engineering (ECE).

The objective of these programs is to graduate doctoral students who:

- Are scholars in their field of research as evidenced by:
  - their ability to do independent research by synthesizing original ideas that are evaluated to be non-trivial contributions by other researchers,
  - the mastery of their discipline by being able to recall, comprehend, apply, analyze, synthesize, and evaluate ideas with intellectual rigor using the major concepts and results of their discipline.
- Can communicate their ideas effectively as evidenced by:
  - their ability to write papers, dissertations, and proposals that are judged to be well-written, well-presented, and well-argued,
  - their ability to give technical presentations that are judged to be clear, concise, and informative.
- The requirements for the Ph.D. programs combine coursework with research work emphasizing mastery of a field of knowledge, familiarity with allied areas, facility in the use of research techniques, responsibility for the advancement of knowledge, and effective communication of ideas. These are tested primarily by comprehensive examinations and the defense of the dissertation rather than by a summation of courses, grades, and credits.
- Student research work is led by internationally renowned researchers in their areas of expertise. One of the strengths of our doctoral programs lies in the ability of the faculty to participate in many research areas of an interdisciplinary nature. Even though EECS offers Ph.D. programs in the two areas indicated above, the research interests of many of our faculty connect these areas.
- The CISE doctoral program targets those students with research interests in topics generally associated with computer and information science and with software aspects of the computer-engineering field. The ECE doctoral program targets students with research interests in topics encountered in the electrical-engineering field and in the hardware area of computer engineering.
- Students in these programs are subject to all regulations of the Graduate School.
- The basic structure of the requirements for a Ph.D. degree is the same for both degrees. What differentiates the programs are the details, namely:
  - The list of topics in which students must demonstrate competencies by completing coursework.
  - The topics covered in the written Qualifying Examination Part I.

Ph.D. Degree Programs

PH.D. DEGREE PROGRAMS IN COMPUTER AND INFORMATION SCIENCE AND ENGINEERING (CISE)
AND ELECTRICAL AND COMPUTER ENGINEERING (ECE)

Admission Requirements

Admission to the Ph.D. programs is highly selective. Only those individuals with superior qualifications and a B.S. and/or M.S. from an accredited institution in computer engineering, computer and information science, electrical engineering, or a related field are invited to apply. Accepted students must start their doctoral program of study in the fall semester. No students will be accepted to start the program in the spring semester. Applicants must provide scores on the general test of the Graduate Record Examination (GRE).

In addition, applicants whose native language is not English must provide scores on the Test of English as a Foreign Language (TOEFL).

Each program has its own admission committee that evaluates the overall academic record of an applicant. Each of these committees uses the following general guidelines during the evaluation process:

- GRE Verbal score of 153 or better (using New GRE Score System);
- GRE Quantitative score of 155 or better (using New GRE Score System);
- GRE Analytical Writing score of 4.5 or better (the GRE Analytical multiple choice is not acceptable);
- For international students: TOEFL computer-based score of 250 (Internet-based score 100; paper-based score 600) or better;

Exceptional candidates who may not satisfy the above general guidelines but excel in other criteria (such as publications in technical conferences and/or journals, scholastic achievement) are encouraged to apply.

Students may apply online by completing the application given at the following web site: apply.embark.com/grad/syracuse/37/.

Guidance Committee

A two-person faculty Guidance Committee assists each newly admitted student with program planning. When identified, the dissertation advisor will serve as the principal source of academic advice and counsel.

Residence Requirements

Students must also satisfy the residency requirements of the Graduate School. These are given in Section 46.0 (Doctoral Degrees) of the Academic Rules and Regulations of Syracuse University at the following web site: syracuse.edu/policies/currentr.pdf.

Academic Requirements

Degree programs are tailored to meet the needs of the individual, subject to certain general departmental requirements. The Ph.D. program consists of coursework, examinations, presentations, and a dissertation.

A minimum of 52 credits of coursework is required by the CISE and the ECE doctoral programs, beyond those taken for the bachelor's degree.

Coursework

Each student must complete at least 48 credits of technical graduate courses at the 600-level or above (courses for graduate students only). Of these 48 credits, 30 credits (number of credits of coursework required for an M.S. degree EECS) provide broad knowledge in the student’s field of doctoral work and 18 credits provide depth in the student's research area. Therefore, these 18 credits are to be taken from specialized courses at the 700-level or above (graduate courses that have a graduate course as a prerequisite) that support the student’s area of research.

Independent study courses cannot be used to satisfy the 700-level requirement. Programs of study for CISE Ph.D. students must include CIS 623, CIS 655, CIS 657, and CIS 675.

In addition, each student must complete at least 4 credits of professional development courses. This requirement is fulfilled by taking one 3-credit course in presentational speaking and one 1-credit course in fundamentals of research. The course in presentational speaking, taught by the Department of Communication and Rhetorical Studies, will equip our doctoral students with the ability to deliver effective technical presentations. The course in fundamentals of research will provide doctoral students with fundamental skills needed in their pursuit of a doctoral degree within the context of a small research project.
The following is the summary breakdown of credit requirements:

Credits

Technical Courses 48
(30 credits to provide broad knowledge in the student's field of doctoral work; 18 credits to provide depth in the student's research area)

Non-Technical Courses 4
(3 credits of presentational speaking to equip doctoral students with the ability to deliver effective technical presentations; 1 credit of fundamentals of research to provide students with fundamental skills needed in their pursuit of a doctoral degree within the context of a small research project.)

Total 52

Doctoral Program Information

To ensure that all doctoral students have a broad knowledge in their field of doctoral work, they must demonstrate competence by completing coursework in at least three areas from the list associated with the doctoral program the student is pursuing. These two lists are maintained by the program committees of the department. The topics in these lists may vary to reflect the change of their importance in providing doctoral students with a broad education. For example, currently:

- A student in the CISE doctoral program must demonstrate competence by completing coursework in at least three of the following areas:
  - Algorithms
  - Architecture
  - Artificial Intelligence
  - Hardware Systems
  - Logic and Theory of Computation
  - Operating Systems
  - Programming Languages and Compilers
  - Software Systems
- A student in the ECE doctoral program must demonstrate competence by completing coursework in at least three of the following areas:
  - Algorithms
  - Circuits - Digital, Analog and RF
  - Communications
  - Computer Architecture and Hardware Design
  - Devices - Electronic, Microwave and Optical
  - Electromagnetics and Power
  - Engineering Mathematics
  - Signal Processing and Control
  - Software Systems

Examinations and Colloquium Presentations

Students must pass the qualifying examination associated with the doctoral program they are pursuing, proposal defense, and dissertation defense. In addition, students must present their research results to the faculty at the department Colloquium Series.

Qualifying Examination (QE)

The QE is composed of two parts: Qualifying Examination Part 1 (QE1) which consists of the written eligibility examination, and Qualifying Examination Part 2 (QE2) which consists of the research examination. To pass the QE, doctoral students must pass both of these examinations.

The objective of the QE1: (Written Eligibility Examination) is to ensure that students have mastered the fundamentals pertinent to their doctoral program of study and possess the mathematical maturity necessary to undertake doctoral research. The QE1 must be taken by all students in a doctoral program in the spring semester of their first year of matriculation into the program regardless of whether they have entered the program with a bachelor’s or master’s degree. In the beginning of each fall semester, the department provides students with the scopes of these examinations. The scopes may vary to reflect the current importance of the topics covered by them.

The objective of the QE2: (Research Examination) is to ascertain whether the doctoral student is ready to engage in research. It will include the student’s presentation of results of a mini research project, chosen by the student after passing the QE1. It must be taken by all students in a doctoral program in the spring semester of their second year of matriculation into the program.

Candidacy

Doctoral students are admitted to candidacy after passing the QE. Therefore, they are considered Ph.D. candidates only after passing this examination.

Research Committee

After passing the QE, the student must identify a faculty member of EECS who will supervise his/her dissertation. The dissertation advisor will guide the student in forming a research committee consisting of two additional faculty members. If any one of these additional faculty members is not from the EECS department, then the membership of the committee must be approved by the chair of EECS. The dissertation advisor will be the chair of this three-member committee. This committee will guide the student during the dissertation work.

Proposal Defense (PD)

The objective of this oral exam is for the student to demonstrate suitable selection of a dissertation topic and adequate preparation for said research. This exam must be taken within two years of passing the QE.

After passing the PD, the student prepares a dissertation, normally carried out under the supervision of the dissertation advisor. While preparing the dissertation, the student gives a presentation(s) of his/her research work at the department Colloquium Series.

Colloquium Presentation

The objective of the student’s presentation(s) at the Department Colloquium Series is to communicate the student's research results to the faculty and students of the department. The student must give at least one talk at this colloquium based on his/her dissertation prior to the final dissertation defense.

The student may request a final oral examination only upon completion of the dissertation and after its approval by the student’s research committee. The research committee is responsible for assessing that the doctoral candidate is a scholar in his/her field of research and can communicate ideas effectively. The assessment demonstrating that the doctoral student has achieved scholarly status must include an outside evaluation by a scholar in the field of the student's dissertation work. This outside evaluation can be in the form of an outside reader who is not a member of the student's research committee, publication in technical journals, or publication in proceedings of refereed conferences.

Dissertation Defense

The objective of this oral exam is to give final certification of doctoral dissertations. It consists of a capstone seminar to communicate main contributions in the doctoral dissertation, open to general audience, followed by an in-depth technical assessment of student’s work by the examining committee. The examining committee will assess mainly the student's dissertation work but may also assess the student's mastery of related topics and previous work in the field.

Financial Support

Financial support for Ph.D. students is available in many forms. Such support normally entails a stipend in addition to a scholarship. Graduate teaching assistants, graduate research assistants, fellows, and other students supported financially by the University must exhibit satisfactory progress toward the chosen degree to be reappointed each year. Satisfactory progress is determined by EECS faculty during the yearly review of all doctoral students.

Time Limit

As required by the Graduate School, all requirements for the Ph.D. degree must be met...
within five years of the satisfactory completion of the QE.

**Master of Philosophy**

The master of philosophy is an intermediate degree between the academic master’s degree and the doctor of philosophy. In order for the master of philosophy degree to be awarded, a student must complete all the requirements for the doctoral degree except the dissertation.

**Current Research Areas**

**Artificial Intelligence** Image segmentation and restoration; pattern and shape recognition; computer vision; expert systems; intelligent systems and other applications of fuzzy logic, neural networks and evolutionary algorithms; learning classifier systems; social network analysis; multi-agent systems.

**Communication and Information Theory** Cognitive radio systems; Shannon theory for multiuser systems; information theoretical security; joint source-channel coding; cooperative communications; energy efficient communications; communication under channel uncertainty and queueing constraints; multiuser MIMO communication systems; MIMO communication with airborne platforms.

**Communications and Signal Processing** Detection and estimation theory; distributed signal processing and data fusion; adaptive signal processing algorithms and architectures; radar signal processing; knowledge-based signal processing; image processing; digital communications; communication theory and processing of auditory signals by the nervous system; coding; parallel algorithms for signal processing; complexity of DSP algorithms; communication networks; photonic communications; weak signal detection in non-Gaussian environments; analysis of bistatic radars.

**Complex Systems** Evolutionary algorithms, neural networks, self-organizing systems, dynamical systems, distributed multi-agent systems.

**Computer System Security** Applying security principles to secure computer, network, and information systems; authentication; access control; data protection; privacy; securing web browsers, web servers, and web applications; Smartphone and mobile system security; malware detection and analysis; applying executable code analysis and virtualization techniques to improve computer security; digital forensic analysis; protocol steganography; detecting and thwarting code injection attacks; developing effective methods and materials to improve security education.

**Distributed Information Systems** Multimedia systems; object-oriented databases; multimedia transport protocols; high bandwidth networks; distributed conferencing; visualization and virtual reality; multimedia storage systems, including optical systems; video on demand; distributed multimedia applications; web technology.

**Dynamical Systems and Control** Control of dynamical systems; Optimal control; Distributed control of large scale interconnected systems subject to communication and/or structural constraints; Synchronization and coordination of multi-agent networks; Computational tools for optimal control of distributed systems; Analysis and control of spatially-periodic, time-periodic, and sampled-data systems.

**Electromagnetic Fields and Antennas** Electromagnetic aperture problems; application of matrix methods to radiation and scattering systems; iterative methods for large electromagnetic problems; analysis of printed circuits; adaptive and smart antennas; antenna arrays; antenna array synthesis; development of high-pulsed power systems; analysis of small radomes; time-domain radar; microwave remote sensing of earth terrain; wave propagation in random media; scattering from random surfaces; scattering from composite dielectric and conducting targets; waves in anisotropic media; radar clutter modeling; millimeter and microwave integrated circuits; numerical solution of electromagnetic field problems.

**High Confidence Design** Formal methods; formal specification, synthesis and verification of software and hardware; computer security; network security.

**Information Fusion and Wireless Sensor Networks** Architectures and algorithms for information fusion; wireless sensor network design; detection, estimation, localization, tracking and classification in wireless sensor networks; security and assurance.

**Logic in Computer Science** Mathematical foundations of hybrid systems and continuous computation, logics for hybrid and continuous computation, quantum computation.

**Low-Power System/Circuit Design** CPU load/tasking scheduling; job scheduling and task migration for multi-node data centers; job scheduling for temperature control; audio/video circuit board design; innovative signal processing algorithms; redundant logic operation elimination for datapath modules; gate sizing and buffer insertion; bias voltage control at transistor level.

**Microelectronics** Solid state sensors; nonlinear dielectric and optical materials; thin film growth and processing; high speed electronic devices and circuits; and power electronics.


**Optics and Wave Phenomena** Wave propagation and applications, linear and nonlinear, dispersive and nondispersive; acousto-optic interactions; optical information processing and optical bi-stability; optical wave mixing; holography; optical interconnects; optical computing algorithms and architectures; pipelined optical binary computing; wave propagation through random media; waves and fields in anisotropic media; nonlinear echoes.

**Photons and Optical Engineering** Optical information processing; interconnection and communication networks; fiber optics, fiber light amplifiers, and lasers; photorefractive and bio-optical materials and their applications in wave-mixing and dynamic holography; micro-optic fabrication; optical computing; electro-optics; optical memory; optical wave propagation and diffractions.

**Power Engineering and Smart Grid** Application, control, and use of distributed energy resources and storage devices; economic, ancillary, and emergency demand response and scheduling optimization under grid and customer-defined constraints; advanced metering infrastructure; communications, information management, and automated power system control technologies.

**Programming Languages** Denotational semantics, logics of programs, formal methods, semantic models of parallel programs, fair behavior and liveness properties of parallel programs, applications of semantic models to program design, parallel program correctness.

**RF and Wireless Engineering** Analysis and design of RF and Wireless and satellite communication circuits and systems.

**Software Engineering** Software models; metric and formal methods; fault-tolerant software and software reliability; software reusability; object-oriented software engineering methods and tools; techniques for software engineering data analysis; distributed and parallel software development; trusted systems.

**Statistical Signal Processing** Detection and estimation theory; decentralized signal processing and data fusion; adaptive signal processing algorithms and architectures; compressive sensing; stochastic resonance and noise enhanced signal processing; remote sensing and image processing; radar signal processing, computer vision and pattern recognition; signal processing for security and information assurance; machine learning.

**Systems Assurance** Systems assurance focuses on the design, development, and deployment of information systems with a particular emphasis on networked systems, information assurance, information security, information integrity, and privacy. Our research focuses on the ways information systems are designed to work reliably, safely, correctly, and securely. These methods also aim to reduce the complexity of systems assurance. Our research also focuses on developing algorithms and protocols to achieve security and privacy in network and distributed computing.

**Theory of Computation** Computational complexity of higher-order functionals, complexity of "lazy" computation, biological models of computation, and computational learning theory.

**VLSI Computer-aided design and architectures** Design, verification and testing of VLSI systems aided by EDA tools (Cadence, Synopsys, etc.); design of digital, analog, and mixed-signal systems; functional verification; testing; computer-aided design techniques for routing, simulation, verification, and synthesis; silicon compilation; formal verification; high-level synthesis; system integration; applications of declarative programming languages; algorithms and architectures for parallel and distributed systems.
measuring capacitance and dielectric loss as students to build semiconductor devices, thin film furnace and chemical processing set ups allow devices and circuits. The laboratory is equipped the fabrication and characterization of integrated processing and measuring instrumentations for This laboratory has and undergraduate students participate in this communication, computer memories, and sensors. These fiber devices are typically 3 to 20 mm the active material at the core cladding boundary. fabricating fibers with very thin layers of optically active material at the core cladding boundary. The optically active materials are semiconductors, metals, lithium niobate, and magnetic materials. These fiber devices are typically 3 to 20 mm long and have a large variety of applications in communication, computer memories, and sensors. Examples of these applications are fiber light amplifiers, sonar detectors, and true image light amplifiers in full color and 3-D, etc. Both graduate and undergraduate students participate in this research.

Fiber Fabrication Research Laboratory This laboratory has a facility for fabricating specialty optical fibers; vacuum systems, including a special ultra-high vacuum system for evacuating ampoules; various furnaces, including a high-pressure furnace for preform fabrication; a fiber-pulling tower capable of drawing about 3 km of fiber from a 20 cm preform; and extensive fiber analysis equipment, including a special fiber microscope and an automatic optical spectrum analyzer. A process has been developed here for fabricating fibers with very thin layers of optically active material at the core cladding boundary. This laboratory is dedicated to communication and signal processing research. On-going research projects include information theoretic study of multi-user communications; decentralized statistical signal processing for information fusion; MIMO communications for airborne platforms; and various enabling technologies for cognitive wireless networks.

Distributed Multiagent Laboratory (DMA Lab) The DMA lab provides a unique environment for exploring basic research and applications on distributed multiagent systems. Areas of research include software agents, real-time intelligent distributed systems, evolutionary and Bayesian game theory, applications of artificial intelligence techniques on computer systems problems, and Internet algorithms and applications.

Wireless Networks Cross-layer design and resource allocation; mobile phone sensing; mobile and distributed computing; wireless smart camera networks; energy efficient wireless networks; market based designs; game theoretic formulations for adversarial environments.

Research Laboratories

Communication Laboratory This laboratory is dedicated to communication and signal processing research. On-going research projects include information theoretic study of multi-user communications; decentralized statistical signal processing for information fusion; MIMO communications for airborne platforms; and various enabling technologies for cognitive wireless networks.

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Microelectronics Laboratory This laboratory has processing and measuring instrumentations for the fabrication and characterization of integrated devices and circuits. The laboratory is equipped with thin film deposition systems, including ion beam assisted sputtering system, thermal evaporation system. Photolithography, high temperature diffusion furnace and chemical processing set ups allow students to build semiconductor devices, thin film sensors, and integrated circuits. Measurement equipments include four-point probe system for measuring capacitance and dielectric loss as a function of frequency and temperature, hall measurement, etc. This laboratory facility is used for both research and teaching. Ongoing research projects involve development of metal-oxide gas sensors, conductive transparent film for solar applications.

Photonics Laboratory The Photonics Laboratory has five fully equipped optics rooms. Each has a vibration isolated optical table and various kinds of optical devices and elements. It has a one-dimensional detector array, a digital rail, a CCD camera and image processing system, a digital scope, and various photo-detectors and laboratory accessories. In addition, we have a 5-W Argon ion laser, a 30 mW He-Ne laser, and a number of semiconductor lasers. Research efforts include information processing for two-dimensional and three-dimensional data related to military as well as commercial applications, micro-fabrication of electro-optical diffractive optical elements, photonic switching as related to computer and communication networks, real-time holography for free-space beam steering and optical intersections, and three-dimensional optical memory and molecular electronics for the future generation of high-density and large-capacity digital storage devices.

Power Engineering and Smart Grid Laboratory has three specialized units. First unit is for Power Electronics experiments, equipped with two switching power pole boards for DC-DC power conversion with capabilities of analog and digital output control and for Electromechanical Devices, equipped with two switching power boards for DC-DC and DC-AC power conversion with capabilities of digital output control along with a set of controlled electromechanical DC and AC devices. Second unit is Smart grid lab, which includes a micro-grid with renewable energy (such as wind, solar) conversion and control, energy storage and control, a double transmission line, a distribution network, 7 feeders and smart meters, a static and a dynamic load, and a power factor correction device. Third unit is Smart home lab, which includes smart home appliances, smart meters with communication node and data processing Interfaces. Primary goals are to provide hands-on experience to students to understand power system operation, to collect and analyze data using the model of a real micro-grid power network, to test different vendors’ equipment, to investigate and compare new system components for measurement and control, and to develop new solutions for local and remote control as well as investigate cyber security.

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Sensor Fusion Laboratory The primary focus of this laboratory is research related to statistical signal processing for multi-sensor systems and cognitive wireless networks. Current research projects involve signal processing for distributed detection and estimation, fusion algorithms for multimodal sensors, cognitive radio networks, security and assurance of cognitive wireless networks and sensor networks, compressive sensing, theory and application of stochastic resonance and wireless sensor networks applications. This laboratory provides state-of-the-art computing facilities.

VLSI Systems Design and CAD Laboratory aims to develop design methodologies and techniques that empower designers to design, test, verify, and build systems on a chip. Current research focus is around high-level synthesis for digital and mixed-signal systems, reconfigurable computing, and CAD for physical design.

Web and Smartphone Security Lab Conducts research on web and Smartphone security. Current research projects involve access control systems for web browsers, web servers, and web applications, authentication, access control, and data protection for Smartphones, and security enhancement for the Android operating system and applications. The lab is also the owner of the SEED project, which produces hands-on lab exercises for computer security education; these exercises are being used by over a hundred universities worldwide. The lab is equipped with Smartphone devices and development technologies, as well as powerful servers for system development.

Electrical & Computer Engineering, PhD

Faculty

Doctor of Philosophy Programs

The Department of Electrical Engineering and Computer Science (EECS) in the College of Engineering and Computer Science at Syracuse University offers Ph.D. degrees in computer and information science and engineering (CISE) and in electrical and computer engineering (ECE).

The objective of these programs is to graduate doctoral students who:

- are scholars in their field of research as evidenced by:
  - their ability to do independent research by synthesizing original ideas that are evaluated to be non-trivial contributions by other researchers,
  - the mastery of their discipline by being able to recall, comprehend, apply, analyze, synthesize, and evaluate ideas with intellectual rigor using the major concepts and results of their discipline.

2. Can communicate their ideas effectively as evidenced by:

- their ability to write papers, dissertations, and proposals that are judged to be well-written, well-presented, and well-argued,
- their ability to give technical presentations that are judged to be clear, concise, and informative.

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The requirements for the Ph.D. programs combine coursework with research work emphasizing mastery of a field of knowledge, familiarity with allied areas, facility in the use of research techniques, responsibility for the advancement of knowledge, and effective communication of ideas. These are tested primarily by comprehensive examinations and the defense of the dissertation rather than by a summation of courses, grades, and credits.

Student research work is led by internationally renowned researchers in their areas of expertise. One of the strengths of our doctoral programs lies in the ability of the faculty to participate in many research areas of an interdisciplinary nature. Even though EECS offers Ph.D. programs in the two areas indicated above, the research interests of many of our faculty connect these areas.

The CISE doctoral program targets those students with research interests in topics generally associated with computer and information science and with software aspects of the computer-engineering field. The ECE doctoral program targets students with research interests in topics encountered in the electrical-engineering field and in the hardware area of computer engineering.

Students in these programs are subject to all regulations of the Graduate School.

The basic structure of the requirements for a Ph.D. degree is the same for both degrees. What differentiates the programs are the details, namely:

- The list of topics in which students must demonstrate competencies by completing coursework.
- The topics covered in the written Qualifying Examination Part I

Learning Outcomes

An ability to acquire necessary skills to conduct independent scholarly work.

An ability to analyze and interpret research date using appropriate methods.

An ability to define research objectives clearly.

An ability to select appropriate methodology to achieve the research objectives and goals.

An ability to communicate the research results to diverse audiences.

Ph.D. Degree Programs

Ph.D. Degree Programs in Computer and Information Science and Engineering (CISE) and Electrical and Computer Engineering (ECE)

Admission Requirements

Admission to the Ph.D. programs is highly selective. Only those individuals with superior qualifications and a B.S. and/or M.S. from an accredited institution in computer engineering, computer and information science, electrical engineering, or a related field are invited to apply. Accepted students must start their doctoral program of study in the fall semester. No students will be accepted to start the program in the spring semester. Applicants must provide scores on the general test of the Graduate Record Examination (GRE).

In addition, applicants whose native language is not English must provide scores on the Test of English as a Foreign Language (TOEFL).

Each program has its own admission committee that evaluates the overall academic record of an applicant. Each of these committees uses the following general guidelines during the evaluation process:

- GRE Verbal score of 153 or better (using New GRE Score System);
- GRE Quantitative score of 155 or better (using New GRE Score System);
- GRE Analytical Writing score of 4.5 or better (the GRE Analytical multiple choice is not acceptable);
- For international students: TOEFL computer-based score of 250 (Internet-based score 100; paper-based score 600) or better;
- GPA of 3.5/4.0 or better.

Exceptional candidates who may not satisfy the above general guidelines but excel in other criteria (such as publications in technical conferences and/or journals, scholastic achievement) are encouraged to apply.

Students may apply online by completing the application given at the following web site: apply.embark.com/grad/syracuse/37/.

Guidance Committee

A two-person faculty Guidance Committee assists each newly admitted student with program planning. When identified, the dissertation advisor will serve as the principal source of academic advice and counsel.

Residence Requirements

Students must also satisfy the residency requirements of the Graduate School. These are given in Section 46.0 (Doctoral Degrees) of the Academic Rules and Regulations of Syracuse University at the following web site: syracuse.edu/policies/currentnr.pdf.

Academic Requirements

Degree programs are tailored to meet the needs of the individual, subject to certain general departmental requirements. The Ph.D. program consists of coursework, examinations, presentations, and a dissertation.

A minimum of 52 credits of coursework is required by the CISE and the ECE doctoral programs, beyond those taken for the bachelor's degree.

Coursework

Each student must complete at least 48 credits of technical graduate courses at the 600-level or above (courses for graduate students only). Of these 48 credits, 30 credits (number of credits of coursework required for an M.S. degree EECS)
provide broad knowledge in the student’s field of doctoral work and 18 credits provide depth in student’s research area. Therefore, these 18 credits are to be taken from specialized courses at the 700-level or above (graduate courses that have a graduate course as a prerequisite) that support the student’s area of research. Independent study courses cannot be used to satisfy the 700-level requirement. Programs of study for CISE Ph.D. students must include CIS 623, CIS 655, CIS 657, and CIS 675.

In addition, each student must complete at least 4 credits of professional development courses. This requirement is fulfilled by taking one 3-credit course in presentational speaking and one 1-credit course in fundamentals of research. The course in presentational speaking, taught by the Department of Communication and Rhetorical Studies, will equip our doctoral students with the ability to deliver effective technical presentations. The course in fundamentals of research will provide doctoral students with fundamental skills needed in their pursuit of a doctoral degree within the context of a small research project.

The following is the summary breakdown of credit requirements:

Credits

Technical Courses 48
(30 credits to provide broad knowledge in the student’s field of doctoral work; 18 credits to provide depth in the student's research area)

Non-Technical Courses 4
(3 credits of presentational speaking to equip doctoral students with the ability to deliver effective technical presentations; 1 credit of fundamentals of research to provide students with fundamental skills needed in their pursuit of a doctoral degree within the context of a small research project.)

Total 52

Doctoral Program Information

To ensure that all doctoral students have a broad knowledge in their field of doctoral work, they must demonstrate competence by completing coursework in at least three areas from the list associated with the doctoral program the student is pursuing. These two lists are maintained by the program committees of the department. The topics in these lists may vary to reflect the change of their importance in providing doctoral students with a broad education. For example, currently:

- A student in the CISE doctoral program must demonstrate competence by completing coursework in at least three of the following areas:
  - Algorithms
- Architecture
- Artificial Intelligence
- Hardware Systems
- Logic and Theory of Computation
- Operating Systems
- Programming Languages and Compilers
- Software Systems

A student in the ECE doctoral program must demonstrate competence by completing coursework in at least three of the following areas:

- Algorithms
- Circuits - Digital, Analog and RF
- Communications
- Computer Architecture and Hardware Design
- Devices - Electronic, Microwave and Optical
- Electromagnetics and Power
- Engineering Mathematics
- Signal Processing and Control
- Software Systems

The objective of the Q E1:

Written Eligibility Examination is to ensure that students have mastered the fundamentals pertinent to their doctoral program of study and possess the mathematical maturity necessary to undertake doctoral research. The QE1 must be taken by all students in a doctoral program in the spring semester of their first year of matriculation into the program regardless of whether they have entered the program with a bachelor’s or master’s degree. In the beginning of each fall semester, the department provides students with the scopes of these examinations. The scopes may vary to reflect the current importance of the topics covered by them.

The objective of the Q E2:

Research Examination is to ascertain that the doctoral student is ready to engage in research. It will include the student’s presentation of results of a mini research project, chosen by the student after passing the QE1. It must be taken by all students in a doctoral program in the spring semester of their second year of matriculation into the program.

Candidacy

Doctoral students are admitted to candidacy after passing the QE. Therefore, they are considered Ph.D. candidates only after passing this examination.

Research Committee

After passing the QE, the student must identify a faculty member of EECS who will supervise his/her dissertation. The dissertation advisor will guide the student in forming a research committee consisting of two additional faculty members. If any one of these additional faculty members is not from the EECS department, then the membership of the committee must be approved by the chair of EECS. The dissertation advisor will be the chair of this three-member committee. This committee will guide the student during the dissertation work.

Proposal Defense (PD)

The objective of this oral exam is for the student to demonstrate suitable selection of a dissertation topic and adequate preparation for said research. This exam must be taken within two years of passing the QE.

After passing the PD, the student prepares a dissertation, normally carried out under the supervision of the dissertation advisor. While preparing the dissertation, the student gives a presentation(s) of his/her research work at the department Colloquium Series.

Colloquium Presentation

The objective of the student’s presentation(s) at the Department Colloquium Series is to communicate the student’s research results to the faculty and students of the department. The student must give at least one talk at this colloquium based on his/her dissertation prior to the final dissertation defense.

The student may request a final oral examination only upon completion of the dissertation and after its approval by the student’s research committee. The research committee is responsible for assessing that the doctoral candidate is a scholar in his/her field of research and can communicate ideas effectively. The assessment demonstrating that the doctoral student has achieved scholarly status must include an outside evaluation by a scholar in the field of the student’s dissertation work. This outside evaluation can be in the form of an outside reader who is not a member of the student’s research committee, publication in technical journals, or publication in proceedings of
College of Engineering and Computer Science

refereed conferences.

**Dissertation Defense**

The objective of this oral exam is to give final certification of doctoral dissertations. It consists of a capstone seminar to communicate main contributions in the doctoral dissertation, open to general audience, followed by an in-depth technical assessment of student’s work by the examining committee. The examining committee will assess mainly the student’s dissertation work but may also assess the student’s mastery of related topics and previous work in the field.

**Financial Support**

Financial support for Ph.D. students is available in many forms. Such support normally entails a stipend in addition to a scholarship. Graduate teaching assistants, graduate research assistants, fellows, and other students supported financially by the University must exhibit satisfactory progress toward the chosen degree to be reappointed each year. Satisfactory progress is determined by EECS faculty during the yearly review of all doctoral students.

**Time Limit**

As required by the Graduate School, all requirements for the Ph.D. degree must be met within five years of the satisfactory completion of the QE.

**Master of Philosophy**

The master of philosophy is an intermediate degree between the academic master’s degree and the doctor of philosophy. In order for the master of philosophy degree to be awarded, a student must complete all the requirements for the doctoral degree except the dissertation.

**Current Research Areas**

Artificial Intelligence Image segmentation and restoration; pattern and shape recognition; computer vision; expert systems; intelligent systems and other applications of fuzzy logic, neural networks and evolutionary algorithms; learning classifier systems; social network analysis; multi-agent systems.

Communication and Information Theory Cognitive radio systems; Shannon theory for multuser systems; information theoretical security; joint source-channel coding; cooperative communications; communication under channel uncertainty and queuing constraints; multuser MIMO communication systems; MIMO communication with airborne platforms.

Communications and Signal Processing Detection and estimation theory; distributed signal processing and data fusion; adaptive signal processing algorithms and architectures; radar signal processing; knowledge-based signal processing; image processing; digital communications; information theory and processing of auditory signals by the nervous system; coding; parallel algorithms for signal processing; complexity of DSP algorithms; communication networks; photonic communications; weak signal detection in non-Gaussian environments; analysis of bistatic radars.


**Computer System Security**

Applying security principles to secure computer, network, and information systems; authentication; access control; data protection; privacy; securing web browsers, web servers, and web applications; Smartphone and mobile system security; malware detection and analysis; applying executable code analysis and virtualization techniques to improve computer security; digital forensic analysis; protocol steganography; detecting and thwarting code injection attacks; developing effective methods and materials to improve security education.

Distributed Information Systems Multimedia systems; object-oriented databases; multimedia transport protocols; high bandwidth networks; distributed conferencing; visualization and virtual reality; multimedia storage systems, including optical systems; video on demand; distributed multimedia applications; web technology.

Dynamical Systems and Control Control of dynamical systems; Optimal control; Distributed control of large scale interconnected systems subject to communication and/or structural constraints; Synchronization and coordination of multi-agent networks; Computational tools for optimal control of distributed systems; Analysis and control of spatially-periodic, time-periodic, and sampled-data systems.

Electromagnetic Fields and Antennas Electromagnetic aperture problems; application of matrix methods to radiation and scattering systems; iterative methods for large electromagnetic problems; analysis of printed circuits; adaptive and smart antennas; antenna arrays; antenna array synthesis; development of high-pulsed power systems; analysis of small radomes; time-domain radar; microwave remote sensing of earth terrain; wave propagation in random media; scattering from random surfaces; scattering from composite dielectric and conducting targets; waves in anisotropic media; radar clutter modeling; millimeter and microwave integrated circuits; numerical solution of electromagnetic field problems.

High Confidence Design Formal methods; formal specification, synthesis and verification of software and hardware; computer security; network security.

Information Fusion and Wireless Sensor Networks Architectures and algorithms for information fusion; wireless sensor network design; detection, estimation, localization, tracking and classification in wireless sensor networks; security and assurance.

Logic in Computer Science Mathematical foundations of hybrid systems and continuous computation, logics for hybrid and continuous computation, quantum computation.

Low-Power System/Circuit Design CPU load/ tasking scheduling; job scheduling and task migration for multi-node data centers; job scheduling for temperature control; audio/video circuit board design; innovative signal processing algorithms; redundant logic operation elimination for datapath modules; gate sizing and buffer insertion; bias voltage control at transistor level.

Microelectronics Solid state sensors; nonlinear dielectric and optical materials; thin film growth and processing, high speed electronic devices and circuits; and power electronics.

**Neural Networks**


**Optics and Wave Phenomena**

Wave propagation and applications, linear and nonlinear, dispersive and nondispersive; acousto-optic interactions; optical information processing and optical bi-stability; optical wave mixing; holography; optical interconnects; optical computing algorithms and architectures; pipelined optical binary computing; wave propagation through random media; waves and fields in anisotropic media; nonlinear echoes.

**Photonics and Optical Engineering**

Optical information processing; interconnection and communication networks; fiber optics, fiber light amplifiers, and lasers; photorefractive and bio-optical materials and their applications in wave-mixing and dynamic holography; micro-optic fabrication; optical computing; electro-optics; optical memory; optical wave propagation and diffractions.

**Power Engineering and Smart Grid:**

Application, control, and use of distributed energy resources and storage devices; economic, ancillary, and emergency demand response and scheduling optimization under grid and customer-defined constraints; advanced metering infrastructure; communications, information management, and automated power system control technologies, electric vehicle integration into power grid.

**Programming Languages**
Denotational semantics, logics of programs, formal methods, semantic models of parallel programs, fair behavior and liveness properties of parallel programs, applications of semantic models to program design, parallel program correctness.

RF and Wireless Engineering Analysis and design of RF and Wireless and satellite communication circuits and systems.

Software Engineering
Software models; metric and formal methods; fault-tolerant software and software reliability; software reusability; object-oriented software engineering methods and tools; techniques for software engineering data analysis; distributed and parallel software development; trusted systems.

Statistical Signal Processing Detection and estimation theory; decentralized signal processing and data fusion; adaptive signal processing algorithms and architectures; compressive sensing; stochastic resonance and noise enhanced signal processing; remote sensing and image processing; radar signal processing, computer vision and pattern recognition; signal processing for security and information assurance; machine learning.

Systems Assurance
Systems assurance focuses on the design, development, and deployment of information systems with a particular emphasis on networked systems, information assurance, information security, information integrity, and privacy. Our research focuses on the ways information systems are designed to work reliably, safely, correctly, and securely. These methods also aim to reduce the complexity of systems assurance. Our research also focuses on developing algorithms and protocols to achieve security and privacy in network and distributed computing.

Theory of Computation
Computational complexity of higher-order functionals, complexity of “lazy” computation, biological models of computation, and computational learning theory.

VLSI Computer-aided design and architectures design, verification and testing of VLSI systems aided by EDA tools (Cadence, Synopsys, etc.); design of digital, analog, and mixed-signal systems; functional verification; testing; computer-aided design techniques for routing, simulation, verification, and synthesis; silicon compilation; formal verification; high-level synthesis; system integration; applications of declarative programming languages; algorithms and architectures for parallel and distributed systems.

Wireless Networks Cross-layer design and resource allocation; mobile phone sensing; mobile and distributed computing; wireless smart camera networks; energy efficient wireless networks; market based designs; game theoretic formulations for adversarial environments.

Systems Assurance Institute (SAI)
The SAI is a collaboration of four renowned Syracuse University institutions: L.C. Smith College of Engineering and Computer Science, School of Information Studies, S.I. Newhouse School of Public Communications, and the Maxwell School of Citizenship and Public Affairs. SAI advances the understanding and state-of-the-practice of systems assurance by providing a collaborative focus among Syracuse University faculty and external affiliates. The collaboration encompasses three major areas: basic and applied research, academic education and workforce development training, and technology transfer prompting economic growth. Technology transfer is accomplished through Syracuse University’s Computer Applications and Software Engineering (CASE) Center. For more information about SAI, visit: sai.syr.edu/. Information about the NSF Scholarship for Service may also be found at this web site.

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**Smart Grid Laboratory**
The laboratory has been designed and equipped by latest technologies, not only for measurements, monitoring, and control of particular components in power electronics and electromechanical devices, but also for the development of complex and advanced smart grid and smart home ideas. The Smart Grid lab section includes a scaled down entire microgrid power system with renewable energy sources, adjustable transmission lines, reconﬁgurable distribution feeders and programmable loads. Synchronized measurement units have been installed to provide our students with hands-on experience and data for further research.

**Application Procedure**
Online application is the preferred method of applying to graduate programs at Syracuse University. Applications submitted online can be processed faster and more efficiently than those filed on paper. Access the online application.

You will receive an e-mail or postcard from Syracuse University when your application has been received and processed. Find out more information on the application process.

**Program**
A program of study is individually designed by each student in consultation with his or her advisor. A student entering the Ph.D. program with a master's degree or an equivalent degree (approved by the Graduate Affairs Committee) is expected to complete 18 credits of 600 or above level of course work and a Ph.D. dissertation (of 0-credits). Students wishing to proceed directly to the Ph.D. degree from a bachelor's degree must complete a program of 48-credit course work (with no more than 9 credits of courses at 500-level) [1] and a Ph.D. dissertation (of 0-credits). A GPA of 3.33 or better is expected for a Ph.D. student. Full-time Ph.D. students must also attend the MAE graduate seminars every semester (MAE 995: 0 credits; graded A/B/C/F, based on attendance) [2]. Graduate courses can be found in the Course Catalog, using the search engine.

**Ph.D. Qualifying Examination**
The MAE Department requires that each Ph.D. student pass a qualifying examination. The qualifying examination will have both written and oral components. The objective of the qualifying examination is to test the student's knowledge of fundamentals and preparedness to conduct dissertation research. Students who enter the MAE graduate program with a B.S. degree must take the written component of the qualifying examination at or before the completion of the fourth semester of their graduate study. Students who enter the Ph.D. program with an M.S. degree (or an equivalent degree) must take the written component of the qualifying examination at or before the completion of two semesters of their first registration in the program. The oral component of the qualifying examination must be taken no later than one year after passing the written examination. As a prerequisite to the oral component of the qualifying examination, students who enter the MAE graduate program with a B.S. degree must complete a minimum of 30 credits after B.S. at the time of taking the oral component of the qualifying exam.

The written component of the qualifying examination will test the student's competency at the level of SU's 600-level courses in mathematics (e.g., MAE 675), plus any two of the following topics: Fluid Dynamics (e.g., MAE 643), Solid Mechanics (e.g., MAE 635), Heat Transfer (e.g., MAE 655 or MAE 657), Thermodynamics (e.g., MAE 651), Design, Manufacturing, Dynamics and Control, and Special Topics in a selected area. If a student selects Special Topics, s/he must inform the MAE Graduate Affairs Committee in writing of the special area in which s/he wants to be examined.

In consultation with the student and his/her adviser, the Graduate Affairs Committee will form a committee of oral examination consisting of 3 to 5 members with a minimum of 2 to 3 members from the MAE Department, including the adviser. The student must provide a proposal for dissertation research to the members of the oral examination committee at least two weeks before the scheduled date of examination. The examination will typically take 2 hours to complete, in which the student will first make a 35-minute presentation of the research proposal, followed by questions from each individual member of the committee. Based on the quality of dissertation proposal, presentation, and answers to the questions, the committee will deliberate and inform the student of the outcome of the examination, and report the outcome to the MAE Graduate Affairs Committee in writing.

In consultation with the adviser, a Ph.D. student must formally apply to take the qualifying examination by petitioning the chair of the Graduate Affairs Committee on or before October 15 in the fall semester or March 15 in the spring semester in order to take the examination during the following academic semester. The written part of the Ph.D. qualifying examination will be given twice a year; one at the end of the fall semester and the other at the end of the spring semester. In the application letter, the student should specify his/her field of study/interest and include a copy of his/her transcript showing the current GPA. The Graduate Affairs Committee determines whether the student has passed the qualifying examination. In the event of failure, the Graduate Affairs Committee may permit the candidate to retake the written and oral examinations only.
Residency Requirement
The residence requirement is set by Academic Rules and Regulations of the Graduate School.

Dissertation
Each student is required to prepare a dissertation of high quality in terms of substance, originality and relevance, on a topic chosen in consultation with the dissertation adviser. The dissertation defense shall be conducted according to the rules of the Graduate School. In preparing the dissertation, the student should comply with accepted standards of style and format. The examination committee may refuse to hold the examination until such standards are met.

Evaluation Of Ph.D. Student’s Progress
In the spring semester, the status of every Ph.D. student will be reviewed by the MAE faculty. The review will include a brief summary by the adviser of the progress made by the student and any current or potential problems. If the progress is unsatisfactory, the student will be given six months to address issues of concern. If the situation has not improved, the student will not be allowed to continue in the program and will be so informed in writing.

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 & 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:
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/Energy Systems Engineering

Contact:
Young B. Moon, Mechanical & Aerospace Engineering Interim Department Chair, 263 Link Hall, 315-443-2341
ybmoon@syr.edu
Thong Dang, Graduate Program Director
263 Link Hall
443-4311
tgdang@syr.edu
John F. Dannenhoffer, Aerospace Engineering Program Director
245 Link Hall
443-3340
jfdannen@syr.edu

Faculty
Jeongmin Ahn, Benjamin Akih-Kumgeh, Michelle Blum, Edward Bogucz, Frederick Carranti, Hamid Dalir, Thong Dang, John Dannenhoffer, Barry Davidson, Mark Glauser, Melissa Green, H. Ezzat Khalifa, Alan Levy, Jacques Lewalle, Young Moon, Shalabah Maroo, Vadrevu Murthy, Michael Roppo, Utpal Roy, Amit Sanjay, Roger Schmidt, Jianshun Zhang, Tong Zhang

Description
The combined degree is for students to complete the Bachelor of Science in Aerospace Engineering and the Masters of Science in Energy Systems Engineering 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.

Admission
Students must be currently enrolled in the BS Aerospace 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.

BSAE Curriculum
First Year-Fall Semester
MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
**College of Engineering and Computer Science**

**Fourth Year Spring Semester**
- AEE 472 - Synth of Aerosp Systems
- AEE 577 - Introduction to Space Flight
- Elective 7 (3 credits)
- Elective 8 (3 credits)

**Total Credits Required: 128**

**MSESE Curriculum**

**Requirements**
A student seeking an MS Degree in Energy Systems Engineering (MSESE) must complete ten (10) 3-credit courses, no more than four (4) of which can be at the 500-level, the remainder must be at the 600-level or higher.

**Required Courses**
The following 2 courses (6 credits) are required of all students regardless of BS major. Students who took these courses as part of their BS degree may substitute 2 courses from the Energy Systems Tracks listed below:

- **MAE 548**: Engineering Economics and Technology Valuation (3 credits)
- **MAE 551**: Energy Conversion (3 credits)

Select either MFE 629 or MAE 630, plus ECS 650 (a total of 6 credits):
- **MFE 629**: Modeling and Optimization Techniques, or
- **MAE 630**: Advanced Practical Optimization (only 1 of these 2)
- **ECS 650**: Managing Sustainability: Purpose, Principles, and Practice (also BUA650)

**Energy Systems Tracks**
Select any 3 courses (9 credits) from one of the 3 tracks listed below:
- **Thermal Energy Track**
  - MAE 553: HVAC Systems Analysis & Design
  - MAE 554: Principles of Refrigeration
  - MAE 585: Principles of Turbomachinery
  - CEN 542: Heat & Mass Transfer Operations
  - MAE 643: Fluid Dynamics
  - MAE 651: Advanced Thermodynamics; or CEN 651: Chem. Engineering Thermodynamics (only 1 of these)
  - MAE 655: Advanced Heat Transfer; CEN 741: Transport Phenomena; or MAE 657: Convective Heat & Mass Transfer (only 1 of these)
- **Electric Energy Track**
  - ELE 514: Electric Power Systems, or ELE 530: Electric Power Generation and Distribution
  - ELE 6xx: Smart Grid;
  - ELE 6yy: Power Electronics

**Program Customization**
Select 2 courses (6 credits) from any of the ESE Tracks listed above, plus 1 course (3 credits) from Business/Management, Social Sciences (Economics, Public Policy...), or Engineering/Computer Science

**Additional Requirements**
- MAE 995: Graduate Seminar (0 Credits)
- MAE 994: Energy-related Capstone Project (0 Credits)

The student will review technical papers or reports in the literature related to the student's field of interest.

The student will prepare an oral presentation summarizing the technical content of the documents reviewed, and present his/her findings before a faculty committee. A hard copy of the presentation, signed by the student advisor, must be submitted to the MAE Graduate Office before the oral presentation.

**Suggested Sequence of Courses**
- Fall, Year 1: MAE 548, MAE 551 and MAE 629 or one Energy Systems Track Elective [9 credits].
- Spring, Year 1: ECS 650, plus two Energy Systems Track Electives. Student may take MAE 630 rather than MAE 629, instead of one of the two Track Electives.
Electives [9 credits]
Summer, Year 1: (Optional): A student may take a Management/Business course, Social Sciences course, or an ECS Technical Elective, if offered in the summer (possible 3 credits).

Year 2: Remaining Electives and 0-credit Capstone Project on an energy-focused topic.

Aerospace Engineering/ Mechanical and Aerospace Engineering

Contacts:
John F. Dannenhoffer, III, AE Program Director
315-443-3340
ejfdannen@syr.edu
Young B. Moon, MAE Interim Department Chair
315-443-2341
ybmoon@syr.edu
Thong Dang, Graduate Program Director
263 Link Hall
443-4311
tgdang@syr.edu

Faculty

Program Description
The combined degree is for students to complete the Bachelor of Science in Aerospace Engineering and the Masters of Science in Mechanical & Aerospace Engineering 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.

Admission
Students must be currently enrolled in the BS Aerospace 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.

BSAE Curriculum
First Year-Fall Semester
MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
CHE 151 - General Chemistry for Engineers Laboratory
ECS 101 - Introduction to Engineering and Computer Science
WRT 105 - Studio 1: Practices of Academic Writing
Elective 1 (3 credits)

First Year-Spring Semester
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
ECS 104 - Engineering Computational Tools
MAE 184 - Engineering Graphics and Computer-Aided Design
Elective 2 (3 credits)

Second Year-Fall Semester
ECS 326 - Engineering Materials, Properties, and Processing
MAT 397 - Calculus III
PHY 212 - General Physics II
PHY 222 - General Physics Laboratory II
ECS 221 - Statics
Elective 3 (3 credits)

Second Year-Spring Semester
MAT 485 - Differential Equations and Matrix Algebra for Engineers
ECS 222 - Dynamics
ECS 325 - Mechanics of Solids
MAE 251 - Thermodynamics
WRT 205 - Studio 2: Critical Research and Writing

Third Year-Fall Semester
MAE 312 - Engineering Analysis
MAE 315 - Mechanical and Aerospace Engineering Laboratory
MAE 341 - Fluid Mechanics
ELE 231 - Electrical Engineering Fundamentals I
ELE 291 - Electrical Engineering Laboratory I
Elective 4

Third Year-Spring Semester
MAE 321 - Dynamics of Mechanical Systems
AEE 342 - Aerodynamics

AEE 343 - Compressible Flow
ELE 312 - Control Systems for MAE
Elective 5

Fourth Year-Fall Semester
AEE 427 - Aircraft Performance and Dynamics
AEE 446 - Propulsion
AEE 471 - Design/Analysis of Aerospace Structure
Elective 6 (3 credits)

Fourth Year-Spring Semester
AEE 472 - Synth of Aerosp Systems
AEE 577 - Introduction to Space Flight
Elective 7 (3 credits)
Elective 8 (3 credits)
Total Credits Required: 128

MSMAE Curriculum
Course Requirements
Graduate courses can be found in the Course Catalog (http://coursecatalog.syr.edu), using the searchengine.M.S. students must complete 30 credits, including a capstone project (MAE 994: 0 credits; graded as Pass/Fail), and must attend at least three (3) semesters of the MAE graduate seminars (MAE 995: 0 credits; graded as A-F, based on attendance) All students must complete three (3) core courses:
- MAE 675 (Methods of Analysis)
- MAE 643 (Fluid Dynamics)
- MAE 635 (Advanced Mechanics of Materials)
Along with the aforementioned three core courses, all students must also complete four (4) more courses in the MAE department. Out of the required 30-credit M.S. degree, students cannot take more than 9 credits (3 courses) at the 500 level. Furthermore, students intending to pursue a Ph.D. degree after the M.S. degree should plan to meet the Ph.D. admission requirements and Ph.D. qualifying examination requirements, and select M.S. level courses accordingly.

Graduation requirements
The exit requirement for the M.S. degree is MAE 994 (Capstone Project). The student should register for MAE 994 in his/her last semester. The student will review papers or reports in the technical literature related to the student's field of interest. Specific requirements will be communicated to the student at the time of registration for MAE 994. The student will
prepare an oral presentation summarizing the technical content of the documents reviewed, and present his/her findings before a faculty committee. A hard copy of the presentation, signed by the student’s adviser, must be submitted to the MAE Graduate Office. The student will then make their oral presentation to a committee of MAE faculty who will determine whether the student has passed or failed. Part-time M.S. students may petition the Graduate Affairs Committee for partial exemption from seminar attendance.

Bioengineering, BS/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
Angela Zachman, Undergraduate Program Director
361 Link Hall, 443-4848, alzachma@syr.edu

Faculty

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 & Study Abroad, College of Engineering & Computer Science, 130 Link Hall, 315-443-5191, mcmace@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 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:
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

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 & Study Abroad, College of Engineering & Computer Science, 130 Link Hall, 315-443-5191, mcmcarce@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:**

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 & Study Abroad, College of Engineering & Computer Science, 130 Link Hall, 315-443-5191, mcmcarce@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:**

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.
College of Engineering and Computer Science

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

Students will complete 129 credits for the 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:
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

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. One course (3 credit hours) at the 500-level or higher may be counted towards both the bachelor's and the master's degrees, so that the two degrees together require at least 150 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
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:
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, 315-443-4440, Fax 315-443-2583; pkghosh@syr.edu

Faculty

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

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 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.

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:
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

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:
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.

Law/Computer Science, JD/MS

Law/Computer Science
The Juris Doctor and Master of Science are combined degrees which may be conferred by the College of Law and Syracuse University’s L.C. Smith College of Engineering and Computer Science (LCS). A J.D./M.S. in Computer Science could significantly enhance the scope of a student’s legal education in areas such as computers, technology and intellectual property law. Students enrolled in this joint degree program may obtain their J.D. and M.S. degrees in substantially less time than would be necessary if the two programs were pursued separately.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbo@law.syr.edu).

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, mcmace@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:
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/Energy Systems Engineering

Description
The combined degree is for students to complete the Bachelor of Science in Mechanical Engineering and the Masters of Science in Energy Systems Engineering 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.

Contact
Young B. Moon, Mechanical & Aerospace Engineering Interim Department Chair

263 Link Hall
315-443-2341
hekhalif@syr.edu
Thong Dang, Graduate Program Director
263 Link Hall
443-4311
tgdang@syr.edu
Michelle Blum, Mechanical Engineering Program Director
239 Link Hall 443-2840
mmblum@syr.edu

Faculty
Jeongmin Ahn, Benjamin Akih-Kumgeh, Michelle Blum, Edward Bogucz, Frederick Carranti, Hamid Dalir, Thong Dang, John Dannenhoffer, Barry Davidson, Mark Glauser, Melissa Green, H. Ezzat Khalifa, Alan Levy, Jacques Lewalle, Young Moon, Shalabh Maroo, Vadrevu Murthy, Upal Roy, Michael Roppo, Amit Sanyal, Roger Schmidt, Jianshun Zhang, Teng Zhang

Admissions
Students must be currently enrolled in the BS Mechanical 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.

BSME Curriculum
First Year-Fall Semester
MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
CHE 151 - General Chemistry for Engineers Laboratory
ECS 101 - Introduction to Engineering and Computer Science
WRT 105 - Studio 1: Practices of Academic Writing
ECN 203 - Economic Ideas and Issues

First Year-Spring Semester
MAT 296 - Calculus II
PHY 211 - General Physics I
PHY 221 - General Physics Laboratory I
ECS 104 - Engineering Computational Tools
MAE 184 - Engineering Graphics and Computer-Aided Design
Elective 1 (3 credits)

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 credits)

Second Year-Spring Semester
MAT 485 - Differential Equations and Matrix Algebra for Engineers
ECS 222 - Dynamics
ECS 325 - Mechanics of Solids
MAE 251 - Thermodynamics
Elective 3 (3 credits)

Third Year-Fall Semester
ECS 326 - Engineering Materials, Properties, and Processing
MAE 315 - Mechanical and Aerospace Engineering Laboratory
MAE 341 - Fluid Mechanics
MAE 312 - Engineering Analysis
Elective 4 (3 credits)

Third Year-Spring Semester
MAE 321 - Dynamics of Mechanical Systems
MAE 355 - Fundamentals of Heat Transfer
MEE 332 - Introduction to Machine Design
ELE 312 - Control Systems for MAE
Elective 5 (3 credits)

Fourth Year-Fall Semester
MFE 331 - Manufacturing Processes
MEE 416 - Mechanical Engineering Laboratory
MEE 471 - Design Practice
Elective 6 (3 credits)
Elective 7 (3 credits)

Fourth Year-Spring Semester
MEE 472 - Synthesis of Mech Systems
WRT 205 - Studio 2: Critical Research and Writing
Elective 8 (3 credits)
Elective 9 (3 credits)

Total Credits Required: 128

MSESE Curriculum

General Requirements
A student seeking an MS Degree in Energy Systems Engineering (MSESE) must complete ten (10) 3-credit courses, no more than four (4) of which can be at the 500-level, the remainder must be at the 600-level.
Required Courses

The following 2 courses (6 credits) are required of all students regardless of BS major. Students who took these courses as part of their BS degree may substitute 2 courses from the Energy Systems Tracks listed below:

- MAE 548: Engineering Economics and Technology Valuation (3 credits)
- MAE 551: Energy Conversion (3 credits)

Select either MFE629 or MAE630, plus ECS650 (a total of 6 credits):

- MFE 629: Modeling and Optimization Techniques, or
- MAE 630: Advanced Practical Optimization (only 1 of these 2)
- ECS 650: Managing Sustainability: Purpose, Principles, and Practice (also BUA650)

Energy Systems Tracks

Select any 3 courses (9 credits) from one of the 3 tracks listed below:

Thermal Energy Track

- MAE 553: HVAC Systems Analysis & Design
- MAE 554: Principles of Refrigeration
- MAE 585: Principles of Turbomachinery
- CEN 542: Heat & Mass Transfer Operations
- MAE 643: Fluid Dynamics
- MAE 651: Advanced Thermodynamics; or CEN651: Chem. Engineering Thermodynamics (only 1 of these)
- MAE 655: Advanced Heat Transfer; CEN741: Transport Phenomena; or MAE657: Convective Heat & Mass Transfer (only 1 of these)
- MAE 658: Building Environmental Modeling & Simulation
- MAE 659: Building Materials &Envelope
- MEE 757: Heat Exchange Systems
- MAE 765: Combustion Phenomena in Engineering

Biorefining

- MAE 686: Fuel Cell Science & Technology

Electric Energy Track

- ELE 514: Electric Power Systems, or ELE530: Electric Power Generation and Distribution
- ELE660x: Smart Grid;
- ELE6yy: Power Electronics

Program Customization

Select 2 course (6 credits) from any of the ESE Tracks listed above, plus 1 course (3 credits) from Business/Management, Social Sciences (Economics, Public Policy...), or Engineering/Computer Science

(ECS) Technical Elective (subject to the 500-level 4-course limit).

Additional Requirements

MAE 995: Graduate Seminar (0 Credits)
MAE 994: Energy-related Capstone Project (0 Credits)

The student will review technical papers or reports in the literature related to the student's field of interest.

The student will prepare an oral presentation summarizing the technical content of the documents reviewed, and present his/her findings before a faculty committee. A hard copy of the presentation, signed by the student advisor, must be submitted to the MAE Graduate Office before the oral presentation

Suggested Sequence of Courses

Fall, Year 1: MAE548, MAE551 and MAE629 or one Energy Systems Track Elective [9 credits].

Spring, Year 1: ECS650, plus two Energy Systems Track Electives. Student may take MAE630 rather than MAE629, instead of one of the two Track Electives [9 credits]

Summer, Year 1: (Optional): A student may take a Management/Business course, Social Sciences course, or an ECS Technical Elective, if offered in the summer (possible 3 credits).

Year 2: Remaining Electives and 0-credit Capstone Project on an energy-focused topic.

Mechanical Engineering/ Mechanical and Aerospace Engineering

Contact

H. Ezzat Khalifa, Mechanical & Aerospace Engineering Department Chair
263 Link Hall

Faculty

Jeongmin Ahn, Benjamin Akil-Kumge, Michelle Blum, Edward Bogucz, Frederick Carranti, Thong Dang, John Dannenhoffer, Barry Davidson, Mark Glauser, Melissa Green, H. Ezzat Khalifa, Alan Levy, Jacques Lewalle, Young Moon, Shalabh Maroo, Vadrevu Murthy, Utpal Roy, Jianshun Zhang

Program Description

The combined degree is for students to complete the Bachelor of Science in Mechanical Engineering and the Masters of Science in Mechanical & Aerospace Engineering 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.

Admission

Students must be currently enrolled in the BS Mechanical 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.

BSME Curriculum

First Year-Fall Semester
MAT 295 - Calculus I
CHE 150 - General Chemistry for Engineers
CHE 151 - General Chemistry for Engineers Laboratory
ECS 101 - Introduction to Engineering and Computer Science
WRT 105 - Studio 1: Practices of Academic Writing
ECN 203 - Economic Ideas and Issues
Elective 9 (3 credits)

Elective 8 (3 credits)

WRT 205 - Studio 2: Critical Research and Writing

MEE 472 - Synthesis of Mech Systems

Elective 7 (3 credits)

Elective 6 (3 credits)

MEE 471 - Design Practice

MEE 416 - Mechanical Engineering Laboratory

Elective 5 (3 credits)

ELE 312 - Control Systems for MAE

MEE 332 - Introduction to Machine Design

MAE 312 - Engineering Analysis

Elective 4 (3 credits)

Third Year-Fall Semester

ECS 326 - Engineering Materials, Properties, and Processing

MAE 315 - Mechanical and Aerospace Engineering Laboratory

MAE 341 - Fluid Mechanics

MAE 312 - Engineering Analysis

Elective 4 (3 credits)

Third Year-Spring Semester

MAE 321 - Dynamics of Mechanical Systems

MAE 355 - Fundamentals of Heat Transfer

MEE 332 - Introduction to Machine Design

ELE 312 - Control Systems for MAE

Elective 5 (3 credits)

Fourth Year-Fall Semester

MFE 331 - Manufacturing Processes

MEE 416 - Mechanical Engineering Laboratory

MEE 471 - Design Practice

Elective 6 (3 credits)

Elective 7 (3 credits)

Fourth Year-Spring Semester

MEE 472 - Synthesis of Mech Systems

WRT 205 - Studio 2: Critical Research and Writing

Elective 8 (3 credits)

Elective 9 (3 credits)

Total Credits Required: 128

MSMAE Curriculum

Course Requirements

Graduate courses can be found in the Course Catalog (http://coursecatalog.syr.edu), using the search engine. M.S. students must complete 30 credits, including a capstone project (MAE 994: 0 credits; graded as Pass/Fail), and must attend at least three (3) semesters of the MAE graduate seminars (MAE 995: 0 credits; graded as A-F, based on attendance)

All students must complete three (3) core courses:

• MAE 675 (Methods of Analysis)
• MAE 643 (Fluid Dynamics)
• MAE 635 (Advanced Mechanics of Materials)

Along with the aforementioned three core courses, all students must also complete four (4) more courses in the MAE department. Out of the required 30-credit M.S. degree, students cannot take more than 9 credits (3 courses) at the 500 level. Furthermore, students intending to pursue a Ph.D. degree after the M.S. degree should plan to meet the Ph.D. admission requirements and Ph.D. qualifying examination requirements, and select M.S. level courses accordingly.

Graduation Requirements

The exit requirement for the M.S. degree is MAE 994 (Capstone Project). The student should register for MAE 994 in his/her last semester.

The student will review papers or reports in the technical literature related to the student’s field of interest. Specific requirements will be communicated to the student at the time of registration for MAE 994. The student will prepare an oral presentation summarizing the technical content of the documents reviewed, and present his/her findings before a faculty committee. A hard copy of the presentation, signed by the student’s adviser, must be submitted to the MAE Graduate Office. The student will then make their oral presentation to a committee of MAE faculty who will determine whether the student has passed or failed. Part-time M.S. students may petition the Graduate Affairs Committee for partial exemption from seminar attendance.

Cybersecurity, CAS

Contact:
Dr. Kishan Mehrotra, Professor and Chair, mehrotra@syr.edu

4-177 Center for Science and Technology
315-443-2811

Faculty:
Drs. Susan Older, sueo@ecs.syr.edu, Shi-Kai Chin, skchin@syr.edu, Stephen Chapin, chapin@syr.edu, Howard Blair, blair@syr.edu, James Royer, jsroyer@syr.edu, Wenliang Du, wedu@syr.edu, Vir Virander Phoha, vvp@ecs.syr.edu, Yuzhe (Richard) Tang, ytzhang100@syr.edu

Description:

The Department of Electrical Engineering and Computer Science offers the 12-credit Certificate of Advanced Study (CAS) in Cybersecurity. This program provides the necessary foundations for the design and development of systems that are assured to be secure. Secure systems exhibit the traditional properties of confidentiality, integrity, and availability through authentication, reference monitoring, and sound design and implementation. Assured systems are secure systems whose properties are verified or proven.

Successful graduates of this program demonstrate the following attributes:

The ability to identify and analyze vulnerabilities in systems, to assess the risks faced by systems, and to develop countermeasures to remedy risks;

The ability to develop systems that are secure;

The ability to deliver software components or systems that have verifiable assurance properties.

Admission:

This program is open to persons who possess at least a Bachelor’s degree in Computer Engineering, Computer Science, or a related field.

Requirements:

To receive the CAS in Cybersecurity, students must satisfactorily complete the following four courses:

• CIS 643 - Computer Security 3 credit(s)
• CIS 644 - Internet Security 3 credit(s)
• CIS 634 - Assurance Foundations 3 credit(s)
• CIS 652 - Building Assured Components 3 credit(s)

Additional Information

Students must maintain a GPA of at least 3.0

Degree:

Certificate of Advanced Study

Total Credits: 12

Environmental Health, CAS

Department Chair:
Dr. Ossama “Sam” Salem

151 Link Hall
315-443-2311
In addition, students must choose two courses from the following:

- CIE 529 - Risk Analysis in Civil Engineering 3 credit(s)
- CIE 555 - Hazardous Waste Management 3 credit(s)
- CIE 764 - Industrial Hygiene Eng 3 credit(s)

GPA Requirement:
Students must achieve a GPA of 3.0 or greater in the four courses used to complete the certificate program.

Degree:
Certificate of Advanced Study

Total Credits: 12

Microwave Engineering, CAS

Faculty

The Department of Electrical Engineering and Computer Science (ECECS) at Syracuse University offers the Certificate of Advanced Study in Microwave Engineering (CASME). This certificate program reflects the Department’s strength in the theoretical and practical aspects of microwave engineering.

Admission Requirements
Admission is based on academic record of a BS in electrical engineering, professional experience, and letter of recommendation.

Educational Objectives and Outcomes
The students earning this certificate will have developed a thorough understanding of microwave theory coupled with the ability to design, simulate, build, and test microwave devices.

The certificate is composed of a comprehensive and coherent collection of courses to ensure that students acquire the following educational outcomes:
- Mastery of the underlying principles of microwave theory.
- Use of microwave theory concepts to design microwave devices satisfying a given set of specifications and to predict their behaviors.
- Use the latest software tools to simulate microwave circuit behaviors.
- Use microwave theory concept and CAD software to optimize microwave circuits to meet given specifications.
- Mastery of the use of microwave equipment such as network analyzer, spectrum analyzer, and antenna chamber.

CASME Requirements
The CASME program builds on the foundation established in a standard undergraduate electrical engineering program.

To earn a CASME the student must take a series of courses depicted below whose description can be found in the catalog course listing.

1. Students must successfully complete:
   - ELE 621 - Electromagnetic Fields 3 credit(s)
   - ELE 623 - Microwave Measurements 3 credit(s)

2. Students must successfully complete four courses from the following list:

   satisfying the restriction specified below:
Public Infrastructure Management and Leadership, CAS

Dr. Ossama “Sam” Salem, 151 Link Hall, omsalem@syr.edu, 315-443-2311

Program Description

The College of Engineering and Computer Science (ECS), in collaboration with the Department of Public Administration (PAI) and the Executive Education Program (Exec Ed) within The Maxwell School (Maxwell) at Syracuse University have created a joint 15-credit certificate program entitled the Joint Certificate of Advanced Studies in Public Infrastructure Management and Leadership (CAS-PIML). This certificate program is geared towards mid-career professionals that are interested in building on their body of experience and expanding their skills and knowledge in infrastructure planning, engineering, management and administration through coursework that is relevant to their knowledge, interests, and needs.

The CAS-PIML will deliver a certificate to students in both ECS and Maxwell that addresses the planning, design, construction, maintenance, security, capital and operating budgets, environmental and social sustainability impacts and public policy considerations, of public infrastructure. Students will develop skills and knowledge that will assure awareness and competency for functional, financial, environmental and social sustainability concerns of our public infrastructure. In this context, public infrastructure is broadly defined as physical service systems, i.e. water, storm water and waste water systems, transportation, electrical power distribution and telecommunications. The certificate program will be enhanced by on-going speaker programs, executive workshops, and seminars. It will be open to students in both colleges. Applications from students seeking only this certificate will also be considered. The application process will be administered by the Executive Education Program of the Maxwell School.

Certificate Requirement

The CAS-PIML will allow mid-career students interested in Public Infrastructure Management an opportunity to complete a 15-credit program, capitalizing on the numerous strengths within ECS, combined with the PAI and Executive Education programs within the Maxwell School of Citizenship and Public Affairs. In the program, they will combine multi-disciplinary academic coursework with the real-world strategy and problem-solving skills necessary for today’s leaders in complex public administration and utility environments. The degree program will integrate core courses with a career-track elective to provide a solid, yet dynamic and pertinent foundation for advanced studies in the technical and practical challenges of the development and oversight of public infrastructure - including water and wastewater systems, transportation, communications and power.

Core Courses (12 credits)

- PAI 895 - Mid-career Training Group 1-3 credit(s)
- PAI 734 - Public Budgeting 3 credit(s)
- CIE 643 - Transportation Engineering 3 credit(s)
- CIE 678 - Rehabilitation of Civil Infrastructure 3 credit(s)
- PAI 601 - Fundamentals of Conflict Studies 3 credit(s)
- PAI 730 - Problems in Public Administration 1-3 credit(s) Managing Individual, Group, and Systemic Conflicts
- PAI 757 - Economics of Development 3 credit(s)
- PAI 777 - Economics of Environmental Policy 3 credit(s)

Total Credits: 15

Total 15 credits leading to a Certificate of Advanced Study in Public Infrastructure Management and Leadership

Sustainable Enterprise (CASSE), CAS

Contact

Todd Moss, Faculty Director Sustainable Enterprise Partnership, 540 Whitman School of Management, 315-443-9215, tmoss@syr.edu

Program Description

The Certificate of Advanced Study in Sustainable Enterprise (CASSE) is offered collaboratively by the Whitman School of Management, the College of Engineering and Computer Science, the State University of New York College of Environmental Science and Forestry, and the Syracuse Center of Excellence in Environmental and Energy Systems. The CASSE integrates business, science, engineering, policy, and practice, taking a transdisciplinary approach to sustainable enterprise.

Students who complete the certificate will be fluent in the economic, environmental, and social dimensions of sustainability and their
interdependence; systems science and its relationship to sustainability; and the natural, financial, technical, legal, and social drivers of sustainability strategy in businesses and other organizations. They will be prepared to engage in transdisciplinary collaboration to develop sustainable solutions to complex organizational challenges.

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

Financial Support
Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Federal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

Additionally, there are partial scholarships available for students who need to take additional courses above and beyond their graduate degree program to complete the CASSE program.

Admission
Students must be matriculated into a graduate program at Syracuse University or SUNY ESF to be considered for admission to the program.

Certificate Requirements
Students must complete 15 credits for the certificate.

- BUA 650 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s) or
- ECS 650 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s) or
- EST 696 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s)
- BUA 651 - Strategic Management and the Natural Environment 3 credit(s) or
- ECS 651 - Strategic Management and the Natural Environment 3 credit(s)
- BUA 759 - Sustainability-Driven Enterprise 3 credit(s) or
- ECS 759 - Sustainability-Driven Enterprise 3 credit(s) or
- EST 796 - Sustainability-Driven Enterprise 3 credit(s)

6 credits of electives
Distributed energy integration and control in Smart

Ph.D. in Electrical and Computer Engineering, Tomislav Bujanovic, Associate Professor

Engineering, and Alternative resource utilization

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. Carrassi, 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

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

Laura E. Condon, Assistant Professor

Ph.D., Colorado Scool of Mines, 2015

Hydrology, water resources management, climate change an sustainability

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

Hamid Dalir, Associate Professor

Ph.D., Tokyo Institute of Technology, 2009

Aircraft structural design, multi-disciplinary design optimization, development of aerospace design tools, structural analysis, composite and nanotechnology in aerospace

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, mechanics, solid mechanics

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 Eftekharejad

Ph.D., Arizona State University, 2012

Power system operations planning; State
Makan Fardad, Assistant Professor
Ph.D., Case Western Reserve University, 1997
VLIS, 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
Alexander A. Friedman, PE. Professor Emeritus
Ph.D., University of California at Davis, 1970
Biological processes in water and wastewater
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
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.
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
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. Heydecker, 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, Spontaneous processes in materials, Device fabrication and measurements
Can Isik, Professor, Senior Associate Dean, College of Engineering and Computer Science
Ph.D., University of Florida, 2007
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
Swiatoslaw W. Kaczmar, Adjunct
Ph.D., Michigan State University, 1993
Toxicology and environmental disposition of chemical and physical contaminants
Christa Kelleher, Assistant Professor
Ph.D., The Pennsylvania State University, 2013
Hydrology, water Quality, conceptual and physically-based modeling, uncertainty and sensitivity analysis
Lance S. Ketcham, Adjunct Faculty
M.S. Syracuse University, 1990 PE.
Engineering design, construction, site investigation, construction materials, geotechnical engineering, engineering ethics and technical communications
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
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 Kyeon 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. of University Illinois at Urbana-Champaign, 2005
Lowell Lingo Jr, Adjunct
Ph.D. Mechanical Engineering, Syracuse University, 2011
Residential building energy 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
Shalahbar Maroo, Assistant Professor
Ph.D., Syracuse University, 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

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 Negussie, 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

Daniel J. Pease, Emeritus Professor  
Ph.D., State University of New York at Buffalo, 1984  
Theory of the computational complexity of higher-type functions, 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

Amit K. Sanyal, Associate Professor  
Ph.D., University of Michigan, 2004  
Dynamics, robotics and control

Tapan K. Sarkar, Professor  
Docteur Honoris Causa de l’Universite Blaise Pascal, France; Docteur Honoris Causa, Polytechnic 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  

Roger Schmidt, Traugott Distinguished Professor
Energy Sources, conversion, and conservation
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, electrodynamics, guided-wave optical devices, optical sensors

Sucheta Soundararajan, 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’ polymers; 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

Pranod 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. Wedder, 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. Wazenekwitz, 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

Teng Zeng, Assistant Professor
Ph.D., University of Minnesota
Environmental organic chemistry

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

Teng Zhang, Assistant Professor
Ph.D. Brown University, 2015
Solid Mechanics and materials

Josef J. Zwislocki, Distinguished Professor Emeritus
Sc.D. Federal Institute of Technology, Zurich 1948
Aerospace Engineering

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 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

AEE 628 - Adv Spacecraft Dyn
College of Engineering and Computer Science
3 credit(s) Irregularly
Analytical techniques, including dyadic operators for rotational motion, Lambert’s theorem and its use in spacecraft mission analysis computer programs, and Bierman’s factorized estimation board.

AEE 636 - Strctral Dynamics/Vehicle
College of Engineering and Computer Science
3 credit(s) Irregularly
Static aeroelasticity, unsteady aerodynamics of airfoils and wings, lifting surface flutter, panel flutter, and dynamic response including modal techniques.
PREREQ: MAE 627

AEE 637 - Adv/Mech/Aerospc/Structr
College of Engineering and Computer Science
3 credit(s) Irregularly
Structural problems not amenable to elementary analysis, such as swept and delta wings, stresses around cutouts, shear lag, torsion with restrained warping, general instability of stiffened shells, thermal stresses. Matrix and energy methods.

AEE 685 - Principles of Turbomachines
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: MAE 585, MEE 685

AEE 727 - Adv Helicopter Dynmcs II
College of Engineering and Computer Science
3 credit(s) Irregularly
Rotary wing dynamics, flapping motion, coupled flap-lag motion. Stability and control, longitudinal dynamics, lateral dynamics, and coupled longitudinal and lateral dynamics.
PREREQ: AEE 627

AEE 747 - Hypersonic Gas Dyn
College of Engineering and Computer Science
3 credit(s) Irregularly
PREREQ: MAE 647

AEE 995 - Graduate Seminar
College of Engineering and Computer Science
0 credit(s)
Crosslisted with: MAE 995

AEE 996 - Special Project
College of Engineering and Computer Science
0-6 credit(s)
Repeatable

AEE 997 - Masters Thesis
College of Engineering and Computer Science
0-9 credit(s) At least 1x fall or spring
Repeatable

AEE 999 - Dissertation
College of Engineering and Computer Science
0-15 credit(s) At least 1x fall or spring
Repeatable

Bioengineering

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 1x 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 575 - Process Control
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CEN 575

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

BEN 600 - 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 601 - Graduate Bioengineering and Chemical Engineering Seminar
College of Engineering and Computer Science
0-1 credit(s) Every semester
Crosslisted with: CEN 601
Selected topics in bioengineering. Presentations by internal and external speakers, discussions with students. Repeatable, 1 credit(s) maximum

**BEN 602 - Ethical Issues in Engineering and Research**  
*College of Engineering and Computer Science*  
1-3 credit(s) At least 1x fall or spring  
Crosslisted with: CEN 602  
Explores the application of professional norms to ethical decision making in engineering and scientific research. Includes examination of cases in light of the requirements of the Responsible Conduct of Research.

**BEN 613 - Readings in Neuroscience**  
*College of Engineering and Computer Science*  
0-3 credit(s) Irregularly  
Crosslisted with: BIO 624, CSD 753, NEU 613, PSY 778  
A literature-based team-taught course focusing on in depth discussions of classical or recent papers of exceptional import to neuroscience. Students will complete weekly readings assigned by faculty and participate in a 3-hr/wk group facilitated discussion

**BEN 614 - Interdisciplinary Methods of Neuroscience**  
*College of Engineering and Computer Science*  
0-3 credit(s) Irregularly  
Crosslisted with: BIO 625, CSD 754, NEU 614, PSY 779  
A practical interdisciplinary survey course whereby neuroscience faculty introduce students to a wide array of methodologies, including molecular, cellular, developmental, systems, behavioral, and cognitive neuroscience approaches to investigate basic, pre-clinical, translational, and clinical questions to unravel the relationship between brain and behavior.

**BEN 633 - Drug Delivery**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: CEN 633  
Double Numbered with: BEN 433  
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 634 - Polymer Physics**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Crosslisted with: CEN 634  
Exploration into the physical properties of polymers focusing on polymer theoretical physics, characterization of their physical properties, and the importance of their structure-property relationships in various applications.

**BEN 635 - Physical Cell Biology**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: BIO 635, CEN 635, CHE 635, PHY 635  
This interdisciplinary class for science and engineering students provides an introduction to the quantitative description of biological systems and processes. The focus is on the biological and physical aspects of structure and function of cells and their subsystems.

**BEN 638 - Open Problems in Soft Interfaces**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: BIO 638, CEN 638, CHE 638, PHY 638  
In this seminar course on soft and biological materials and interfaces, teams from science and engineering will identify, discuss and assess current articles from the literature. Writing skills related to publishing peer-reviewed research are introduced.

**BEN 648 - Biofluid Dynamics**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Crosslisted with: MAE 648  

**BEN 658 - Biomedical Imaging**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BEN 458  
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 662 - Biofuels, Bioproducts, and Biorefining**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: CEN 662  
Double Numbered with: BEN 462  
Survey of modern technologies available for the production of transportation fuels from abundant natural resources. Additional work required of graduate students.

**BEN 664 - Quantitative Physiology**  
*College of Engineering and Computer Science*  
4 credit(s) At least 1x fall or spring  
Double Numbered with: BEN 364  
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 665 - Biomechanics**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BEN 465  
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, MAT 485, BEN 664

**BEN 666 - Advanced Biomechanics**  
*College of Engineering and Computer Science*  
3-4 credit(s) Irregularly  
Double Numbered with: BEN 466  
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 665

**BEN 668 - Biomaterials & Medical Devices**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: BEN 468  
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 670 - Experience Credit**  
*College of Engineering and Computer Science*  
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. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable
BEN 673 - Biomanufacturing
College of Engineering and Computer Science
3 credit(s)
Crosslisted with: CEN 673
Double Numbered with: BEN 473
Students learn the governing principles of conventional and advanced manufacturing techniques, which are adapted/modified to engineer living tissues/organs, biomedical products and test-platforms for investigating fundamental cell biology. Extra work required for graduate students.
PREREQ: BEN 364 OR BEN 664

BEN 674 - Medical Image Processing & Analysis
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: BEN 474
Introductory medical image processing and analysis. An open source software that has been developed for this purpose will be used. Additional work required of graduate students.

BEN 687 - Advanced Biomanufacturing Design
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Bioengineering solution development experience. Team development of a bioengineering innovation. Brainstorm, design, iterate and test hypotheses. Lecture and experiential learning. Hands on concept development and evaluation, bioengineering industry exposure, visual management, oral, and poster presentations.

BEN 690 - Independent Study
College of Engineering and Computer Science
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

BEN 741 - Biopolymers
College of Engineering and Computer Science
3 credit(s) Irregularly
Polymer structure, physical properties, and clinical applications of natural and synthetic biomedical polymers. Polymer synthesis, structural and molecular characterization, material properties, polymer processing, biocompatibility, and polymer degradation will be discussed.
PREREQ: BEN 668

BEN 768 - Surfaces of Biomaterials
College of Engineering and Computer Science
3 credit(s) Irregularly
Metallic, ceramic, and polymeric surfaces used in biomaterials. Surface forces, structure, chemistry, electrochemical behavior of surfaces, and corrosion reactions related to material-body interactions will be discussed and surface-analytical techniques present.

BEN 997 - Thesis for the M.S. Degree
College of Engineering and Computer Science
1-6 credit(s) Every semester
Independent investigation on a topic of interest under supervision of a member of the faculty.
Repeatable 11 time(s), 12 credits maximum

Chemical Engineering

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 - Biowaivering Engineering
College of Engineering and Computer Science
3 credit(s) At least 1x 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
College of Engineering and Computer Science

PREREQ: CEN 353 AND CEN 587

CEN 575 - Process Control
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 575
PREREQ: MAT 485

CEN 576 - Green Engineering
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
PREREQ: CEN 341 AND 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

CEN 600 - 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

CEN 601 - Graduate Bioengineering and Chemical Engineering Seminar
College of Engineering and Computer Science
0-1 credit(s) Every semester
Crosslisted with: BEN 601
Selected topics in bioengineering. Presentations by internal and external speakers, discussions with students.
Repeatable, 1 credits maximum

CEN 602 - Ethical Issues in Engineering and Research
College of Engineering and Computer Science
1-3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 602
Explores the application of professional norms to ethical decision making in engineering and scientific research. Includes examination of cases in light of the requirements of the Responsible Conduct of Research.
PREREQ: MAE 341 OR CEN 333

CEN 633 - Drug Delivery
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 633
Double Numbered with: CEN 433
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 634 - Polymer Physics
College of Engineering and Computer Science
3 credit(s) Irregularly
Crosslisted with: BEN 634
Exploration into the physical properties of polymers focusing on polymer theoretical physics, characterization of their physical properties, and the importance of their structure-property relationships in various applications.

CEN 635 - Physical Cell Biology
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 635, BIO 635, CHE 635, PHY 635
This interdisciplinary class for science and engineering students provides an introduction to the quantitative description of biological systems and processes. The focus is on the biological and physical aspects of structure and function of cells and their subsystems.

CEN 638 - Open Problems in Soft Interfaces
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 638, BIO 638, CHE 638, PHY 638
In this seminar course on soft and biological materials and interfaces, teams from science and engineering will identify, discuss and assess current articles from the literature. Writing skills related to publishing peer-reviewed research are introduced.

CEN 643 - Fluid Dynamics
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: MAE 643
Review of undergraduate fluids; kinematics, vorticity; dynamics, stresses, Euler and Navier-Stokes equations; energy, Bernoulli’s equation; potential flows; Stokes flows; boundary layers; flow separation; other applications.

CEN 651 - Chemical Engineering Thermodynamics
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

CEN 661 - Environmental Chemistry and Analysis
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CIE 671
Double Numbered with: CEN 461
An introduction to chemical principles in natural and engineered environmental systems. Thermodynamics and kinetics of reactions; acid-base chemistry; environmental organic chemistry; treatment process design applications. Includes selected laboratory exercises. Additional work is required of graduate students.

CEN 662 - Biofuels, Bioproducts, and Biorefining
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: BEN 662
Double Numbered with: CEN 462
Survey of modern technologies available for the production of transportation fuels from abundant natural resources. Additional work required of graduate students.

CEN 671 - Chemical Engineering Methods I
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Use of fundamental physical, chemical and mathematical principles involving chemical engineering problems. Problems associated with transport theory and chemical kinetics requiring the solution of partial differential equations using orthogonal function expansions. Duhamel’s theorem and other techniques.
CEN 672 - Applied Env Microbiology  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Introduction to flow phenomena in polymeric fluids; the non-Newtonian rheological behavior of polymer solutions and melts; constitutive relations for the flow properties; applications in polymer processing; characterization of polymer mechanical properties, morphology and structure.  
PREREQ: CEN 741

CEN 673 - Biomanufacturing  
College of Engineering and Computer Science  
3 credit(s)  
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 677 - Advanced Chemical Engineering Design  
College of Engineering and Computer Science  
3 credit(s)  
Chemical Engineering Masters Project, to be completed by each student as an individual advanced design project, involving a chemical process synthesis. Students are expected to apply mathematical and engineering concepts to complete the design calculations.

CEN 741 - Transport Phenomena I  
College of Engineering and Computer Science  
3 credit(s) Irregularly  
PREREQ: CEN 542, CEN 671

CEN 761 - Rheology &Polymer Process  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
PREREQ: CEN 542, CEN 671

CEN 772 - Chemical Engineering Methods II  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Continuation of CEN 671. Use of integral equations and variational methods in chemical reactor calculations. Solution of nonlinear differential equations using perturbation, weighted residual, and numerical methods.  
PREREQ: CEN 671

CEN 786 - Kinetics  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
PREREQ: CEN 587, CEN 651, CEN 671

CEN 789 - Advanced Topics in Colloidal and Interfacial Phenomena  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Topics include colloidal interactions in dispersions; stability of colloidal systems; adsorption/desorption phenomena; many-body interactions; periodic colloid structures; order/disorder transformations in colloidal fluids; and rheology and transport properties of interacting dispersions.

CEN 790 - Advanced Topics in Chemical Engineering  
College of Engineering and Computer Science  
1-3 credit(s) Upon sufficient interest  
Recent advances in chemical engineering science. Repeatable

CEN 890 - Advanced Topics In Chemical Engineering  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Recent advances in chemical engineering research, including experimental techniques. Repeatable

CEN 997 - Masters Thesis  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Masters Thesis Repeatable

Civil Engineering

CIE 529 - Risk Analysis in Civil Engineering  
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 - Structural Steel Design  
College of Engineering and Computer Science  
3 credit(s) Odd academic yr e.g. 2007-8  
Design of structures using load- and resistance-factor 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 - Prestressed Concrete Design  
College of Engineering and Computer Science  
3 credit(s) Odd academic yr e.g. 2007-8  
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 338  
COREQ: CIE 443

CIE 548 - Engineering Economics and Technology Valuation  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Engineering Economics and Technology Valuation Repeatable

PREREQ: CIE 548

CIE 549 - Construction Management  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Construction Management Repeatable

PREREQ: CIE 548

CIE 648 - Environmental Engineering  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Environmental Engineering Repeatable

PREREQ: CIE 548
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  
PREREQ: MAE 552

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 - Principles Environmental Toxicology  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x 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 123) OR (CHE 106 AND 107 AND 275) OR (CHE 109 AND 129)

CIE 555 - Hazardous Waste Management  
*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.  
PREREQ: CIE 327 AND CIE 342

CIE 556 - 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.  
PREREQ: CIE 472/CEN 472

CIE 557 - 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 558 - Solid Wastes: Collection and Disposal  
*College of Engineering and Computer Science*  
3 credit(s) Odd academic yr e.g. 2007-8  
Uses of bioremediation in engineering applications. Role of microorganisms in degradation of pollutants and contaminants. Regulatory, societal, and legal issues of bioremediation.  
PREREQ: MAE 548

CIE 559 - Construction Engineering and Project Management  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
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.  
PREREQ: CIE 401

CIE 560 - Principles of Wind Turbines  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Crosslisted with: ECS 588, MAE 588  
Aerodynamics, performance, control, and electrical aspects wind turbines.  
PREREQ: MAE 341

CIE 561 - 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 562 - Hazardous Waste Management  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
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

CIE 563 - Designing With 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 564 - Designing With Geosynthetics  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Design of filters using geotextiles, retaining structures using geosynthetics, design of liquid impoundment, and solid waste containment facilities.  
PREREQ: MAT 296 AND CIE 341

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 566 - Water and Wastewater Treatment Plant Design  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Probability distribution and cumulative density functions. Extreme value problems. First and second order reliability analyses of series and parallel civil engineering systems.

**CIE 631 - Structural Analysis I**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Classical theories of analysis and the application of theories of elasticity, plasticity, and elastic stability to structures.

**CIE 632 - Structural Analysis II**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  

**CIE 633 - Finite Element Analysis**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Fundamentals and techniques of modern finite analytical methods, including the finite element and finite difference methods. Application to elasticity, plate, shell seepage, torsion, and fracture mechanics problems.

**CIE 634 - Stability Analysis of Structural Systems**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  

**CIE 635 - Adv Reinforced Concrt Des**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Relation of straight line and ultimate theories to the analysis and design of reinforced and prestressed concrete structures.

**CIE 636 - Pstsc Des/Steel Strctures**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Design of steel structures using plasticity theory. Concept of plastic hinge and collapse mechanism. Lower and upper bound theorems. Equilibrium and mechanism methods for the analysis and design of continuous beams and frames.

**CIE 637 - Adv Soil Mech Fndtns I**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  

**CIE 638 - Adv Soil Mech&Foundtns II**  
*College of Engineering and Computer Science*  
3 credit(s) Odd academic yr e.g. 2007-8  

**CIE 639 - Sustainable Development and Infrastructure Management**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: ECS 636  
Introduction to public infrastructure systems. Management of infrastructure systems. Monitoring, planning, design, construction, maintenance/rehabilitation and operation. Emphasis on water, storm water, waste water, transportation, electrical power distribution and telecommunications systems.

**CIE 641 - Seepage & Earth Dam Desgn**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
PREREQ: CIE 337

**CIE 642 - Treatment Processes in Environmental Engineering**  
*College of Engineering and Computer Science*  
3-4 credit(s) At least 1x fall or spring  
Double Numbered with: CIE 442  
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 471 OR CIE 671

**CIE 643 - Transportation Engineering**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: CIE 443  
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 644 - Building Environmental Modeling and Simulations**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Crosslisted with: MAE 658  
Building environmental analysis; contaminant source and sink models; single-zone, multizone, and computational fluid dynamics models.  
PREREQ: MAE 341 AND MAE 355

**CIE 649 - Building Materials and Envelope**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Crosslisted with: MAE 659  
Understanding of heat, air and moisture transfer effects on building envelope/enclosure through linking material properties, assembly design and hygrothermal performance with structural and mechanical considerations. Introduction to advanced computational tools for building enclosures.

**CIE 651 - Physical-Chemical Process**  
*College of Engineering and Computer Science*  
3 credit(s) Even Academic Yr e.g. 2004-5  
Principles used in the analysis and design of physical-chemical water/waste-treatment processes.

**CIE 652 - Biologic Waste Treatment**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Theories and Advanced design concepts for aerobic, anoxic and anaerobic system applications.

**CIE 653 - Applied Aquatic Chemistry**  
*College of Engineering and Computer Science*  
3 credit(s) Odd academic yr e.g. 2007-8  
Principles of aquatic chemistry applied to the solution of environmental engineering problems. Includes acid-base, carbonate, precipitation-dissolution, coordination, and oxidation-reduction chemistry.  
PREREQ: CIE 471 OR CIE 671

**CIE 657 - Biogeochemistry**  
*College of Engineering and Computer Science*  
3 credit(s) Double Numbered with: CIE 457  
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.

**CIE 660 - Seminar Civil Engineering**  
*College of Engineering and Computer Science*  
0 credit(s) Every semester  
Research report presentations by students and visiting specialists in civil engineering and
associated sciences and professions. Required each semester of all M.C.E. candidates.

Repeatable

CIE 662 - Chem/Soil & Natural Srfcs
College of Engineering and Computer Science
3 credit(s) Even Academic Yr e.g. 2004-5
General principles. Chemical properties of soils, nature of surfaces, soil formation, soil minerals, and mechanisms regulating solute chemistry in soil solutions.

CIE 663 - Introduction to Sustainable Engineering
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: CIE 463
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 666 - Design of Concrete Bridges
College of Engineering and Computer Science
3 credit(s) Irregularly

CIE 671 - Environmental Chemistry and Analysis
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CEN 661
Double Numbered with: CIE 471
An introduction to chemical principles in natural and engineered environmental systems. Thermodynamics and kinetics of reactions; acid-base chemistry; environmental organic chemistry; treatment process design applications. Includes selected laboratory exercises. Additional work is required of graduate students.

CIE 672 - Applied Env Microbiology
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CEN 672
Double Numbered with: CIE 472
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 673 - Transp Procss/Env Engrng
College of Engineering and Computer Science
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: CIE 473
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, CIE 341

CIE 674 - Environmental Health Engineering
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: CIE 474

CIE 675 - Rehabilitation of Civil Infrastructure
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: CIE 475
Principles and practice of stabilization techniques for soil and rock material: chemical, mechanical electrosmosis, chemical and cement grouting, de-watering, heating, and dynamic consolidation.

PREREQ: CIE 327 OR MAE 341, CIE 341

CIE 676 - Environmental Geostatistics
College of Engineering and Computer Science
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: GEO 687
Statistical analysis of spatial patterns in environmental data. Exploratory data analysis; estimation, modeling, and interpretation of variograms; prediction using kriging. Applications in engineering, geography, earth science and ecology. Use of geostatistical software.

CIE 690 - Independent Study
College of Engineering and Computer Science
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

CIE 700 - Industrial Hygiene Eng
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Toxic properties of industrial dusts, gaseous contaminants, and ionizing radiations. Theories and principles of maximum permissible doses. Control techniques.

PREREQ: CIE 637

CIE 737 - Applied Soil Mechanics
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Shallow and deep foundations, buried structures, and earth structures.

PREREQ: CIE 638

CIE 739 - Soil Stabilization
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Principles and practice of stabilization techniques for soil and rock material: chemical, mechanical electrosmosis, chemical and cement grouting, de-watering, heating, and dynamic consolidation.

PREREQ: CIE 637

CIE 740 - Soil Dynamics
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Earthquakes: magnitude, intensity, design acceleration history, response spectra, soil behavior under dynamic loads, wave propagation, shear modulus and damping dynamic analysis, design of retaining walls, shallow foundations and deep foundation for earthquakes.

PREREQ: CIE 637

CIE 741 - Special Investigtns/CIE
College of Engineering and Computer Science
3 credit(s) Every semester
Special investigations and research in civil engineering designed to meet the needs of individual students.

Repeatable

CIE 995 - Master's Exit Paper
College of Engineering and Computer Science
0 credit(s) Every semester
Written paper on a topic in civil or environmental engineering, supervised by a faculty advisor and submitted in accordance with current departmental guidelines.
all students electing the non-thesis option for a master's degree.
Repeatable

CIE 997 - Masters Thesis
College of Engineering and Computer Science
0-6 credit(s) Every semester
Research thesis on some phases of engineering to be selected by student and approved by department chair.
Repeatable

CIE 999 - Dissertation
College of Engineering and Computer Science
0-15 credit(s) Every semester
Research Studies directed to the dissertation under supervision of member of Graduate School faculty.
Repeatable

Computer and Information Science

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
PREREQ: CIS 351

CIS 543 - Control of Robots
College of Engineering and Computer Science
3 credit(s) At least 1x 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 275 OR MAT 375

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 I/O, libraries, interfaces, modular system Organization. Substantial programming assignments.
PREREQ: ECS 102

CIS 556 - 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; non-neural 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) Irregularly

CIS 607 - Mathematical Basis for Computing
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 607
Mathematical logic including predicate calculus, induction, theories with equality relations and groups. Mathematical logic applied to structures like nonnegative integers, tuples, lists, and trees.

CIS 612 - Cloud Computing
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 612
Virtualized data centers, including virtual machine management, power management, and networking; cloud computing applications; and mobile cloud computing.

CIS 623 - Structured Programming and Formal Methods
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Reasoning about programs: specification, design, and realization of provably correct programs. Program and data structures, binding, procedures, recursion.
PREREQ: CIS 607/CSE 607

CIS 625 - Computer Graphics
College of Engineering and Computer Science
3 credit(s) Irregularly

CIS 626 - Theoretical Foundations of Computer Science
College of Engineering and Computer Science
3 credit(s) Irregularly
Computability and decidability, first-order logic, lambda calculus systems, program verification, semantics of programming languages, theory of language.
CIS 628 - Introduction to Cryptography
College of Engineering and Computer Science
3 credit(s)
Classical and public-key cryptography. Topics include classical cryptosystems and their cryptanalysis, RSA and other public key cryptosystems, pseudo-random sequences, zero-knowledge protocols, related ethical and social concerns.

CIS 644 - Internet Security
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 644

CIS 646 - Enumeration, Designs, and Matroids
College of Engineering and Computer Science
3 credit(s) Irregularly
Crosslisted with: MAT 646
Generating functions, Polya enumeration, set systems, design parameters, finite projective planes, matroids.

CIS 651 - Mobile Application Programming
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 651
Double Numbered with: CIS 444
Development of applications for different mobile devices. Creating effective user interfaces, efficient use of persistent storage, network services, GPS, maps and sensors. Additional work required of graduate students.

CIS 652 - Building Assured Components
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 652
Development of system components with provable functional properties. Students gain hands-on experience walking the virtuous cycle of executable specifications, formal verification, and translation of specifications into a mainstream language.

CIS 655 - Computer Architecture
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

CIS 656 - Concepts in Concurrent Programming
College of Engineering and Computer Science
3 credit(s) Irregularly
Introduction to concurrent programming. Programming-language features for expressing concurrent execution (processes), process communication, and process synchronization; methods of proving properties of concurrent programs, techniques for implementing concurrent systems.

CIS 657 - Principles of Operating Systems
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Design and implementation of operating systems. Process and memory management, resource scheduling, file system management, I/O and kernel services and structuring. Includes weekly lab using a Unix-like operating system.

CIS 665 - Computer Vision
College of Engineering and Computer Science
3 credit(s) Irregularly
Image formation, edge detection, filtering, stereo vision, surface orientation. Optical flow, boundary detection, region growing, texture, motion analysis, representation of two- and three-dimensional objects. Knowledge representation issues for computer vision.

CIS 666 - Expert Systems
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Asymptotic analysis and recurrences; classical numeric algorithms; advanced data structures; graph algorithms; divide-and-conquer, greedy choice, dynamic programming, and other computational strategies; NP-completeness.

**CIS 678 - Quantum Computing**  
*College of Engineering and Computer Science*  
3 credit(s)  
Purpose of QC; quantum registers; quantum state transitions; classical vs quantum models of computation; quantum cellular automata and Hilbert Space 12; no-cloning theorem; quantum teleportation; quantum logic.  
PREREQ: CIS 607/CSE 607, MAT 397 OR MAT 331

**CIS 681 - Software Modeling and Analysis**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Project-based course covering software modeling, architecture, design, and implementation using diagramming, analysis tools, and common sense engineering methods to analyze performance of concurrent, message-driven systems.

**CIS 685 - Simulation & Modelling**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Use of the digital computer for simulation systems. Modeling, construction of flowcharts, fixed-time increment and time-status register methods of simulating, simulation languages, generation of random numbers, experimental design, and analysis of simulated data.  
PREREQ: IOR 525, 526, OR MAT 521, MAT 525

**CIS 686 - Discrete Event Systems**  
*College of Engineering and Computer Science*  
3 credit(s)  
A spectrum of discrete event models used to describe and analyze discrete event systems will be covered including automata, Petri nets, Markov chains, and introductions to queuing models and discrete event simulation.  
PREREQ: ECS 525 OR MAT 521 OR ELE 606

**CIS 687 - Object Oriented Design**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Basic methods of object oriented software design and implementation. Object oriented software engineering methodologies: specification, hierarchical decomposition, reuse and extensibility. Implementation of projects in object oriented programming language and analysis of design case studies.

**CIS 688 - Internet Programming**  
*College of Engineering and Computer Science*  
3 credit(s)  
Crosslisted with: CSE 686

A laboratory projects course. Programming models on web clients and servers. Topics include: browser and server object models, tagged languages, emphasizing HTML and XML, ASP programming, and database connectivity.

**CIS 690 - 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

**CIS 712 - Data Parallel Computing**  
*College of Engineering and Computer Science*  
3 credit(s)  
Languages and algorithms for massively parallel computation on SIMD architectures. Illustrations drawn from applications such as shortest path determination, connected components, N-body problems, graphics, differential equations, simulated annealing, calculation in finite fields. Substantial programming project.  
PREREQ: CIS 623

**CIS 731 - Artificial Neural Networks**  
*College of Engineering and Computer Science*  
3 credit(s)  

**CIS 752 - Wireless Network Security**  
*College of Engineering and Computer Science*  
3 credit(s)  
Wireless communication technologies, wireless LAN, mobile IP, mobile ad-hoc networks, wireless sensor networks, secure routing, secure locationing, key management, trust management, group communication, energy efficiency.  
COREQ: CIS/CSE 758 OR CIS/CSE 785

**CIS 767 - Mathematical Theory of Computation**  
*College of Engineering and Computer Science*  
3 credit(s)  
The classical theory of effective computability, primarily concerned with the existence of computer methods. Topics: Turing machines,
CIS 774 - Principles of Distributed Access Control
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 774
Specification, verification, and design of secure networks using formal logic. Includes historical access control models, role-based access control, and logics for reasoning about authentication, authorization, audit, delegation, and trust.
PREREQ: CIS 607 OR CSE 607

CIS 775 - Distributed Objects
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 775
Design and implement software components using the Component Object Model (COM). Students will develop programs with COM components, ActiveX controls, and distributed applications.

CIS 776 - Design Patterns
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 776
A seminar course based on the book “Design Patterns.” Object oriented design methods emphasizing conceptual understanding rather than software development projects.

CIS 777 - Advanced Windows Programming
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 778
Seminar/projects course including: MFC library; windows architecture Graphics Device Interface; common, ActiveX, and Explorer controls; bitmaps; property sheets; toolbars; and status bars.

CIS 784 - Software Engineering Studio
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 784
Applied software engineering and project management. Students are expected to analyze, plan, design, implement, test, and evaluate original software systems to stand alone or be integrated into an existing environment. All work performed in teams.
PREREQ: CSE 682 OR CSE 687

CIS 787 - Analytical Data Mining
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 787
Knowledge discovery process, data warehouses, OLAP data mining inference based on statistics and machine learning, rule generation; emphasis on analytical aspects; applications.
PREREQ: CIS 675, ELE 606, CSE 607

CIS 996 - Master's Project
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Analysis and specification of a substantial programming exercise from a precise software definition. Top-down, modular design of algorithms and data structures. Complete and professional documentation of full implementation, including verification and performance analysis.

CIS 997 - Masters Thesis
College of Engineering and Computer Science
1-6 credit(s) At least 1x fall or spring
Repeatable

CIS 999 - Dissertation
College of Engineering and Computer Science
1-15 credit(s) At least 1x fall or spring
Repeatable

Computational Science

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.

CPS 621 - Introduction to Probability and Statistics
College of Engineering and Computer Science
4 credit(s) At least 1x 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.

CPS 640 - Tpcs:Ntwkng&Multimed Appl
College of Engineering and Computer Science
3 credit(s)
Current topics in networking and multimedia applications. Topics may include advanced networking solutions, performance issues and design of multimedia delivery systems, and integration of distributed multi-media software.
Repeatable

CPS 681 - Explorations in Computing and Programming
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
A project-focused study in core computing concepts. Implementation and synthesis of the concepts via scripting, programming, and IDEs, focusing on large distributed data. Utilize computing as an “amplifier” for journalism. Basic programming experience recommended.

CPS 688 - Algorithms for Computational Journalism and Linguistics
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
A hands-on approach to algorithms for practical applications. Collaborative filtering, graphical algorithms, visualization of information, searching and document ranking, and optimizations. Focus on Internet-based programming and database-oriented client-server model.

CPS 690 - 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

CPS 782 - Capstone Project Course for Computational Journalism
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Jointly taught by computer science and journalism instructors. Students are asked to submit a major project proposal in computational journalism.
COREQ: CIS 668 OR IST 664

Computer Engineering

CSE 561 - Digital Machine Design
College of Engineering and Computer Science
3 credit(s) At least 1x 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

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


PREREQ: CSE 458

CSE 584 - Assurance Foundations

College of Engineering and Computer Science

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

Crosslisted with: CIS 634

Foundational theory, concepts, and computer-assisted reasoning tools necessary for assurance. Topics include functional programming, theorem proving, and logic for reasoning about access control, security, and trust.

CSE 585 - Introduction to VLSI Testing and Verification

College of Engineering and Computer Science

3 credit(s)

CSE 586 - Introduction to VLSI Testing and Verification

College of Engineering and Computer Science

3 credit(s)

CSE 587 - Switching Theory

College of Engineering and Computer Science

3 credit(s)

CSE 588 - Translator Design

College of Engineering and Computer Science

3 credit(s) Upon sufficient interest

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 589 - 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

CSE 601 - Mathematical Basis for Computing

College of Engineering and Computer Science

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

Crosslisted with: CIS 607

Mathematical logic including predicate calculus, induction, theories with equality relations and groups. Mathematical logic applied to structures like nonnegative integers, tuples, lists, and trees.

CSE 602 - Mathematical Basis for Computing

College of Engineering and Computer Science

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

Crosslisted with: CIS 602

Mathematical logic including predicate calculus, induction, theories with equality relations and groups. Mathematical logic applied to structures like nonnegative integers, tuples, lists, and trees.

CSE 607 - Mathematical Basis for Computing

College of Engineering and Computer Science

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

Crosslisted with: CIS 607

Mathematical logic including predicate calculus, induction, theories with equality relations and groups. Mathematical logic applied to structures like nonnegative integers, tuples, lists, and trees.

PREREQ: CSE 585, CIS 586

CSE 651 - Mobile Application Programming

College of Engineering and Computer Science

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

Crosslisted with: CIS 651

Double Numbered with: CSE 444

Development of applications for different mobile devices. Creating effective user interfaces, efficient use of persistent storage, network services, GPS, maps and sensors. Additional work required of graduate students.

CSE 652 - Building Assured Components

College of Engineering and Computer Science

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

Crosslisted with: CIS 652

Development of system components with provable functional properties. Students gain hands-on experience walking the virtuous cycle of executable specifications, formal verification, and translation of specifications into a mainstream language.

CSE 653 - Assurance Foundations

College of Engineering and Computer Science

3 credit(s)

CSE 654 - Assurance Foundations

College of Engineering and Computer Science

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

Crosslisted with: CIS 654

Foundational theory, concepts, and computer-assisted reasoning tools necessary for assurance. Topics include functional programming, theorem proving, and logic for reasoning about access control, security, and trust.

CSE 655 - Assurance Foundations

College of Engineering and Computer Science

3 credit(s)

CSE 656 - Assurance Foundations

College of Engineering and Computer Science

3 credit(s)

CSE 657 - Assurance Foundations

College of Engineering and Computer Science

3 credit(s)

CSE 658 - Assurance Foundations

College of Engineering and Computer Science

3 credit(s)

CSE 659 - Assurance Foundations

College of Engineering and Computer Science

3 credit(s)

CSE 660 - Topics in Mobile Programming

College of Engineering and Computer Science

3 credit(s) Upon sufficient interest

Crosslisted with: CIS 660

Double Numbered with: CSE 440

A variety of subjects surveyed or a particular subject in depth. Additional coursework required of graduate students.

Repeatable 1 time(s), 0 credits maximum

CSE 661 - Advanced Computer Architecture

College of Engineering and Computer Science

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

Advanced computer architecture including discussion of instruction set design (RISC and CISC), virtual memory system design, memory hierarchies, cache memories, pipelining, vector processing, I/O subsystems, co-processors, and multiprocessor architectures. Case studies of current systems.

PREREQ: CSE 585, CIS 586

CSE 662 - Advanced Computer Architecture

College of Engineering and Computer Science

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

Crosslisted with: CIS 662

Advanced computer architecture including discussion of instruction set design (RISC and CISC), virtual memory system design, memory hierarchies, cache memories, pipelining, vector processing, I/O subsystems, co-processors, and multiprocessor architectures. Case studies of current systems.

PREREQ: CSE 585, CIS 586

CSE 663 - Computer Security

College of Engineering and Computer Science

3 credit(s)

Crosslisted with: CIS 663


CSE 664 - Internet Security

College of Engineering and Computer Science

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

Crosslisted with: CIS 664


PREREQ: CSE 585, CIS 586

CSE 665 - VLSI Design Methods

College of Engineering and Computer Science

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

Crosslisted with: ELE 664

MOS VLSI technologies. MOS and CMOS digital circuits. CMOS layout, design rules and simulation. Examples of combinational and sequential circuits. Dynamic logic. Regular structures: memories, PLAs. Individual design project required.
CSE 665 - Principles and Practices of FPGA-based Design  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Become familiar with Field Programmable Gate Arrays architecture, programming and applications. A hands-on learning experience using commercially available development kits. Use the FPGA platform as a System on Chip in a parallel computing environment.  
PREREQ: CSE 561

CSE 671 - Embedded System Design  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Methodologies for systematic design of embedded systems. System specification, architecture modeling, component partitioning, estimation metrics, hardware/software co-design. Embedded computing platforms and programming, ASIC, CPU, and glue logic. Individual project required.

CSE 674 - Advanced Data Structures and Algorithms  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Internals of all major data structures. Algorithms for sorting, balancing trees, graph querying, hashing and compression are discussed. Cache effects. Parallel algorithms.

CSE 681 - Software Modeling and Analysis  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Crosslisted with: CIS 681  
Project-based course covering software modeling, architecture, design, and implementation using diagramming, analysis tools, and common sense engineering methods to analyze performance of concurrent, message-driven systems.

CSE 682 - Software Engineering  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Requirements and specifications including tools such as PSL/PSA, SREM, design techniques; Functional decomposition; data flow; data structure, theoretical issues in testing, testing strategies: path; domain; mutation and error specific, cost and reliability models.

CSE 683 - Expert Systems  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Production rules, forward/backward chaining, Rete algorithm, structured objects, introduction to an expert system language/shell, probabilistic inference networks, fuzzy logic, knowledge acquisition, and explanation generation.

Programming project or term paper required.

CSE 684 - Introduction to Artificial Intelligence  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Crosslisted 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 CSE 667, not for CIS 467.

CSE 686 - Internet Programming  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Crosslisted with: CIS 688  
A laboratory projects course. Programming models on web clients and servers. Topics include: browser and server object models, tagged languages, emphasizing HTML and XML, ASP programming, and database connectivity.

CSE 687 - Object Oriented Design  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Crosslisted with: CIS 687  
Basic methods of object oriented software design and implementation. Object oriented software engineering methodologies: specification, hierarchical decomposition, reuse and extensibility. Implementation of projects in object oriented programming language and analysis of design case studies.

CSE 690 - Independent Study  
College of Engineering and Computer Science  
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.

CSE 691 - Special Problems in Computer Systems Engineering  
College of Engineering and Computer Science  
1-4 credit(s) Upon sufficient interest  
Topics vary and represent current interests in computer engineering. Repeatable.

CSE 731 - VLSI Timing Analysis  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Delay modeling and timing analysis of interconnections and gates. Critical path analysis and delay budgeting. Buffer insertion and device sizing. Switch and circuit level simulations.  
PREREQ: CSE 664

CSE 762 - Distributed Computing Systems  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Distributed systems modeling using languages such as ADA and CSP. Issues of concurrency control, deadlocks, synchronization,resource allocation, failure recovery and knowledge representation in distributed operating systems, data bases and AI systems; including case studies.  
PREREQ: CSE 585, CSE 661

CSE 764 - Advanced Topics in Synthesis of VLSI Systems  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Issues in design and synthesis of modern VLSI systems from abstract high-level behavioral specifications: temporal and spatial optimizations, synthesis for low power, reconfigure computing, (digital/analog and SW/HW) co-design, formal specification and verification.  
PREREQ: CSE 561, CSE 664

CSE 765 - VLSI Testing and Verification  
College of Engineering and Computer Science  
3 credit(s) At least 1x fall or spring  
Fault modeling and simulation, automatic test pattern generation, design for testability, boundary scan architectures, and built-in self-test. Functional simulation, coverage metrics, event-based and assertion-based verification, and formal methods including model checking and logical equivalence checking.  
PREREQ: CSE 561, CSE 664

CSE 771 - Sequential Machine Theory  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  
Theoretical aspects and algebraic structure of sequential machines. Characterization of complete and incomplete machines, decomposition, and state assignment problems. Deterministic and nondeterministic finite state machines and regular expressions. Linear machines and machine identification.

CSE 772 - Testing of Digital Circuits  
College of Engineering and Computer Science  
3 credit(s) Upon sufficient interest  

CSE 773 - CAD: Formal Design  
College of Engineering and Computer Science
Accounting, research proposal required.

Specification languages, and modeling and storage structures, interrogation and update, data group discussion of papers in the field. Data and 3 credit(s) upon sufficient interest

College of Engineering and Computer Science
CSE 781 - Database Management Systems
3 credit(s) upon sufficient interest
Group discussion of papers in the field. Data and storage structures, interrogation and update, data base creation, architectural alternatives, problem specification languages, and modeling and optimization. Research proposal required.

PREREQ: CSE 561, CSE 607

CSE 782 - Models and Metrics in Software Engineering
College of Engineering and Computer Science
3 credit(s) upon sufficient interest
Need of models and metrics; software science; cyclomatic complexity; and extensions; error analysis; reliability, cost and productivity models.

PREREQ: CSE 682

CSE 784 - Software Engineering Studio
College of Engineering and Computer Science
3 credit(s) at least 1x fall or spring
Crosslisted with: CIS 784
Applied software engineering and project management. Students are expected to analyze, plan, design, implement, test, and evaluate original software system to stand alone or be integrated into an existing environment. All work performed in teams.

PREREQ: CSE 681 OR CSE 687

CSE 787 - Analytical Data Mining
College of Engineering and Computer Science
3 credit(s) at least 1x fall or spring
Crosslisted with: CIS 787
Knowledge discovery process, data warehouses, OLAP, data mining inference based on statistics and machine learning, rule generation; emphasis on analytical aspects; applications.

PREREQ: CIS 675, ELE 606, CSE 607

CSE 788 - Computer-Aided Design fro VLSI and Digital Systems
College of Engineering and Computer Science
3 credit(s) at least 1x fall or spring
Computer aids for automatic physical design of digital systems. Algorithms for partitioning, placement, wire routing, layout compaction, etc. Programming competence required.

PREREQ: CSE 664

CSE 789 - Computer Aided Design of Digital Systems: Logic Design
College of Engineering and Computer Science
3 credit(s) at least 1x fall or spring
Computer aids for automatic logic design. Heuristic algorithms for single and multiple output, two-level and multiple-level logic minimization, logic synthesis, design verification, simulation and formal methods, hardware accelerators.

PREREQ: CSE 561, CSE 607

CSE 791 - Special Problems in Computer Systems Engineering
College of Engineering and Computer Science
1-4 credit(s) upon sufficient interest
Topics vary and represent current interests in computer engineering.
Repeatable 5 time(s), 24 credits maximum

CSE 864 - Topics in VLSI Design
College of Engineering and Computer Science
3 credit(s) irregularly
Seminar on the design and analysis of very large scale integrate circuits and systems. Opportunities for chip fabrication and testing.

PREREQ: CSE 664

CSE 890 - Independent Study
College of Engineering and Computer Science
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 permission of supervising instructor or instructor and the department.
Repeatable

CSE 891 - Special Problems in Computer Systems Engineerin
College of Engineering and Computer Science
1-4 credit(s) upon sufficient interest
Work on special projects. Instructor presents new or special material.
Repeatable

CSE 895 - Engineer Degree Project
College of Engineering and Computer Science
0-6 credit(s) upon sufficient interest
Independent investigation or original research on engineering problem under faculty supervision.
Repeatable, 6 credits maximum

CSE 896 - Master's Project
College of Engineering and Computer Science
0 credit(s) upon sufficient interest
Engineering investigation or analysis and evaluation of a journal paper. Written report in accordance with current departmental guidelines. Required of all students electing the nonthesis option for the master's degree.
Repeatable

CSE 897 - Masters Thesis
College of Engineering and Computer Science
1-6 credit(s) upon sufficient interest
Independent investigation on a topic of interest under supervision of a member of the graduate school faculty. Credit to be arranged.
Repeatable, 6 credits maximum

CSE 999 - Dissertation
College of Engineering and Computer Science
Repeatable, 6 credits maximum
1-15 credit(s) Upon sufficient interest
Research on a doctoral dissertation under the supervision of a member of the graduate school faculty. Credit to be arranged.
Repeatable 29 time(s)

**Electrical & Computer Engineering**

**ECE 756 - Random Processes**
*College of Engineering and Computer Science*
0 credit(s)

**Engineering and Computer Science**

**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
PREREQ: ECS 525 OR MAT 521

**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 526 OR MAT 521

**ECS 555 - Virtual Design Studio for Green Building Systems (VDS-GBS)**
*College of Engineering and Computer Science*
3 credit(s) At least 1x fall or spring
Integrative design methodology; Interactions between form, structure, and flows of energy & mass, and their impacts on building performance; Computer simulation tools for performance-based design. Exploration of green building design and technology through case studies

**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

**ECS 629 - Modeling and Optimization Techniques**
*College of Engineering and Computer Science*
3 credit(s) Upon sufficient interest
Introduction to major deterministic and stochastic modeling techniques, including linear programming and its extensions, integer programming, dynamic programming, Markov chains, queuing theory, simulation, and other modeling techniques.

**ECS 630 - Simulation and Data Analytics**
*College of Engineering and Computer Science*
3 credit(s) Upon sufficient interest
Introduction to discrete-event simulation, system dynamics, and agent-based simulation; hybrid simulation modeling, input and output data analysis, tools and techniques needed for practice, uses of simulation for predictive and prescriptive analytics.
PREREQ: ECS 526

**ECS 636 - Sustainable Development and Infrastructure Management**
*College of Engineering and Computer Science*
3 credit(s) Odd academic yr e.g. 2007-8
Crosslisted with: CIE 639
Introduction to public infrastructure systems. Management of infrastructure systems. Monitoring, planning, design, construction, maintenance/ rehabilitation and operation. Emphasis on water, storm water, waste water, transportation, electrical power distribution and telecommunications systems.

**ECS 651 - Strategic Management and the Natural Environment**
*College of Engineering and Computer Science*
3 credit(s) At least 1x fall or spring
Crosslisted with: BUA 651
Sustainability from firm perspective. Regulatory, international, resource, market, and social drivers of environmental strategy. Impact of sustainability-related strategies on competitive advantage and potential liability.
PREREQ: ECS 650/BUA 650

**ECS 666 - Advanced Course in Engineering I**
*College of Engineering and Computer Science*
6 credit(s)
Multidisciplinary course of study to develop engineering leadership skills. Weekly problems on engineering law, engineering mathematics, modeling, control theory, system and signals, thermodynamics, structural analysis, materials.

**ECS 667 - Advanced Course in Engineering II**
*College of Engineering and Computer Science*
6 credit(s)
Continuation of ECS 666. Covers fluid mechanics, environmental engineering, computer hardware and software theories, modeling and simulation, network theory and implementation. 
PREREQ: ECS 666

**ECS 691 - Fundamentals of Research**
*College of Engineering and Computer Science*
1 credit(s)
Subjects such as selection of a dissertation topic, state-of-the-art search, research proposal, intellectual property, and academic integrity will be examined within the context of a mini-research project.

**ECS 759 - Sustainability-Driven Enterprise**
*College of Engineering and Computer Science*
3 credit(s) At least 1x fall or spring
Crosslisted with: BUA 759
CAS in Sustainable Enterprise capstone. Sustainable approaches to complex organizational challenges, opportunities: organizational, industry, stakeholder analysis, sustainability objectives, strategies, and metrics. Multidisciplinary team consulting project.
PREREQ: ECS 650/BUA 650 AND ECS 651/BUA 651

**Engineering**
EGR 670 - Professional Practice
College of Engineering and Computer Science
0 credit(s) Every semester
Full-time practical engineering work experience with a participating employer, which is related to the student's field of study, and is of a semester's duration.
Repeatable

EGR 770 - Professional Training
College of Engineering and Computer Science
0 credit(s) Every semester
Full-time practical work experience, with a participating employer, which is related to the student's field of study and is of a semester's duration.
Repeatable

Electrical Engineering

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

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 - Electromagnetic Compatability
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
PREREQ: ELE 324 AND 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 electro-mechanical 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
PREREQ: ELE 351

ELE 553 - Communications Engineering
College of Engineering and Computer Science
3 credit(s) Irregularly
Integration 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 1x 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

ELE 601 - Applications of Complex Function Theory
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

ELE 602 - Boundary Value Problems I
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

ELE 603 - Functional Methods of Engineering Analysis
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

ELE 606 - Probabilistic Methods in Electrical Engineering
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

ELE 612 - Modern Control Systems
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
State space representation. State variable feedback design. Controllability, observability, and identifiability. Optimum design and the matrix Ricatti equation.

ELE 617 - Power Electronics
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: ELE 417
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.

ELE 618 - Sensors & Measurements
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: ELE 418
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 621 - Electromagnetic Fields
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Development of electromagnetic theory from the basic postulates leading to Maxwell’s equations in differential and integral forms. Solution to static, quasi-static, and wave-propagation problems.

ELE 623 - Microwave Measurements
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

ELE 625 - High Frequency Transmission Systems
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Transmission line parameters, transients on lossless lines, time-harmonic excitation of lines, Smith chart, impedance matching techniques, matrix representation of multiport devices, coupled transmission systems, even and odd mode theory, circuit theory of rectangular waveguides.

ELE 633 - Discrete and Integrated Analog Electronic Circuits
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Linear and non-linear circuit models of electronic devices as derived from structural and empirical parameters. Anatomy and applications of integrated operational amplifiers; active filters, multipliers, comparators, voltage-controlled oscillators, waveform generators, phase-locked loops.

ELE 635 - Digital Electronic Circuits
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Digital device and circuit technology and trends. Nanoscale semiconductor devices and memories as well as magnetic and optical memories. Semiconductor industry road map. Device fabrication techniques. DA and AD conversion circuits.

ELE 642 - Introduction to Solid-State Physics
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: PHY 576
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 576

ELE 643 - Theory of Semiconductor Devices
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Fundamental theory of semiconductor devices and their linear and nonlinear mathematical and circuit models. Frequency response and switching characteristics of discrete and integrated structures comprising both bipolar and field-effect devices.

ELE 651 - Digital Communications
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
PREREQ: ELE 551

ELE 652 - Digital Audio Signal Processing
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Double Numbered with: ELE 452
Course combines classroom theory with hands-on lab. Covers digital audio fundamentals, filter-design, DSP architecture, parallel assembly programming, circular buffers, processing music signals. Additional work required of graduate students.

ELE 658 - Data Networks: Design and Performance
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 658
PREREQ: CIS 321 OR MAT 521
COREQ: ELE 606

ELE 659 - Digital Signal Processing I
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

ELE 664 - VLSI Design Methods
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Crosslisted with: CSE 664
MOS VLSI technologies. MOS and CMOS digital circuits. CMOS layout, design rules and simulation. Examples of combinational and sequential circuits. Dynamic logic. Regular structures: memories, PLAs. Individual design project required.

ELE 681 - Introduction to Photonic Engineering
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Topics include: geometrical theory; optical diffraction theory; angular spectral propagation theory; Fresnel and Fraunhofer integral solutions; gaussian beam theory; reflection and refraction; mathematics of polarization; lenses and lenslike media; and photons and atoms.

ELE 682 - Fiber Optic Communication
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Topics include: 1) network structures; 2) links; 3) full nets; 4) measures of networks; 5) conductivity; 6) transfer rates; 7) present network constraints; 8) new demands on networks; 9) architectures and interconnections; 10) instrumentation for analysis; and 11) control, regulation, and standardization.

ELE 683 - Infrared Engineering
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Topics include: 1) review of optical diffraction theory; 2) radiometry; 3) blackbody radiation theory; 4) IR sources; 5) atmospheric IR transmissions; 6) IR optics; 7) IR detectors and noise; 8) IR lasers; 9) passive systems; and 10) active, heterodyne IR radar systems.

ELE 685 - Photonic Devices
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Topics include: 1) electro optic detectors; 2) photo diodes; 3) avalanche photo-diodes; 4) multi-quantum well detectors; 5) photo-multipliers;
6) micro-channel plates; 7) multi-quantum well modulators; 8) Mach-Zhender modulators and switches; 9) couplers; 10) wavelength division couplers; and 11) grating devices.

ELE 691 - Special Topics in Electrical Engineering
College of Engineering and Computer Science
1-4 credit(s) Upon sufficient interest
Topics vary and represent current interests in electrical engineering.
Repeatable

ELE 702 - Boundary Value Problems II
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Continuation of ELE 602. Green's functions, integral equations, transform methods, and approximation techniques.
PREREQ: ELE 601, ELE 602

ELE 703 - Special Topics in Engineering Mathematics
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Advanced techniques in the analytical solution of engineering problems. Topics may include linear vector spaces, advanced applications of the theory of functions of complex variables, transform methods, variational and perturbation techniques.
Repeatable

ELE 704 - Neural Networks and Fuzzy Logic Applications
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Neural networks and fuzzy logic to develop algorithms and computer programs for engineering and other applications, such as financial, medical, and sociological. Use non-parametric statistics to measure performance.
PREREQ: ELE 603

ELE 712 - Optimal Control Systems
College of Engineering and Computer Science
3 credit(s) Irregularly
PREREQ: ELE 612

ELE 715 - Robot Manipulators I
College of Engineering and Computer Science
3 credit(s) Irregularly
Crosslisted with: MEE 715
Robot manipulators and their defining equations. Transformations, kinematics, dynamics, and motion trajectories. Control considerations, compliance and organization of programming. Includes a hardware and software laboratory.
PREREQ: ELE 612

ELE 721 - Antennas and Antenna Systems
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
PREREQ: ELE 621

ELE 722 - Microwave Filters
College of Engineering and Computer Science
3 credit(s) Irregularly
PREREQ: ELE 623

ELE 723 - Microwave Transistor Amplifiers
College of Engineering and Computer Science
3 credit(s) Irregularly
Two-port network representations, matching networks, power gain equations, stability conditions, simultaneous conjugate match, constant gain, VSWR and noise figure circles, balanced and feedback amplifiers. Design, simulate, build, and test a microwave amplifier.
PREREQ: ELE 623

ELE 724 - Microwave Oscillators
College of Engineering and Computer Science
3 credit(s) Irregularly
Matching networks, S-parameters. Oscillation conditions, one-port and two-port Negative-resistance Oscillators, oscillator design using large-signal measurements, DROs, YIG Oscillators, VCOs, and Phase noise. Design, simulate, build, and test a microwave oscillator.
PREREQ: ELE 623

ELE 725 - Electromagnetic Engineering I
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Time varying electromagnetic fields. Field theorems, propagation and reflection of waves, wave guides, resonators, radiation, and diffraction. Applications to antenna theory.
PREREQ: ELE 621

ELE 726 - Computational Methods of Field Theory
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Functional analysis, method of moments, and variational methods. Applications to electrostatics, magnetostatics, two-dimensional electromagnetic fields, antennas, scatterers, and apertures.
PREREQ: ELE 621

ELE 728 - Planar Microwave Antennas
College of Engineering and Computer Science
3 credit(s) Irregularly
Review of the fundamentals of antennas. Theory of microstrip antennas, dual and circularly polarized antennas, feeding techniques, mutual coupling, arrays of patches, effect of substrate and the ground plane. Design, simulate, build, and test a planar microwave antenna.

ELE 742 - Electronic Materials
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Electronic properties of dielectric, magnetic, and superconducting materials. Application to devices.
PREREQ: ELE 621

ELE 751 - Wireless Communications
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
PREREQ: ELE 606 AND ELE 651

ELE 752 - Coding Theory and Its Applications
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Algebra or error correcting codes, finite fields, cyclic codes, BCH codes, Convolutional codes, Viterbi and stack algorithms. Applications to communications and data storage systems.
PREREQ: ELE 606 AND ELE 651

ELE 753 - Radar Engineering
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
PREREQ: ELE 651

ELE 755 - Digital Image Processing
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Two-dimensional signals and systems. Image formation and perception. Representation, coding, filtering, restoration, and enhancement. Feature extraction and scene analysis. Introduction to computer vision.

PREREQ: ELE 601, ELE 659

ELE 756 - Random Processes
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

PREREQ: ELE 606
COREQ: ELE 651

ELE 757 - Information Theory
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

PREREQ: ELE 606
COREQ: ELE 651

ELE 758 - Selected Topics in Data Networks
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

PREREQ: ELE 658
Repeatable

ELE 759 - Digital Signal Process II
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Spectral analysis with Fast Fourier transform. Advanced filtering algorithms. Multichannel signal processing. Selected topics on DSP applications.

PREREQ: ELE 659

ELE 781 - Dielectric Waveguides and Fibers
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Topics include: 1) propagating and radiating modes in dielectric waveguides; 2) circular waveguides-fibers; 3) modes in fibers; 4) single mode fibers; 5) Raleigh and Raman effects and losses in fibers; and 6) practical experiments in laboratory.

PREREQ: ELE 621 OR ELE 681

ELE 784 - Optical Information Processing
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Fourier transforming and imaging properties of lenses. 2-D linear systems. Frequency analysis. 2-D information processing, synthetic aperture radar, planar and volume holography and applications. Bragg diffraction, optical memory and photonics in computing systems.

PREREQ: ELE 681

ELE 786 - Laser Propagation and Modulation
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Topics include: 1) wave propagation in anisotropic media, 2) index modulation tensors, 3) birefringent topical systems, 4) periodic media, 5) acousto-optics, 6) electro-optic effects, 7) second harmonic generation, 8) phase conjugation, and 9) nonlinear optics.

PREREQ: ELE 681

ELE 787 - Lasers
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

PREREQ: ELE 681

ELE 791 - Advanced Topics in Electrical Engineering
College of Engineering and Computer Science
1-4 credit(s) Upon sufficient interest
Topics vary and represent current interests in electrical engineering. Each offering has a graduate-level prerequisite.

Repeatable

ELE 821 - Special Topics in Electromagnetic Theory
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Advanced and current topics in electromagnetic theory. Topics vary each term. May include: array theory, electromagnetic compatibility, numerical methods, propagation and radiation in ionized media, moving media, and random media.

Repeatable

ELE 827 - Electromagnetic Engineering II
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Modern methods for solving electromagnetic field problems. Equivalence theorems, Green's function techniques, integral equations, variational solutions and transform solutions.

PREREQ: ELE 725

ELE 847 - Semiconductor Optoelectronics
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Optical and optoelectronic properties of semiconductors. Applications to lasers, lamps, photodetectors, and solar cells.

PREREQ: ELE 643

ELE 849 - Special Topics in Solid State
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Modern methods for analyzing the quantum normal modes of materials in the solid state and their technological applications. May be repeated for credit with instructor's consent.

PREREQ: ELE 756

ELE 852 - Kalman Filters
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Models for linear systems and stochastic processes, estimation techniques, Kalman filter derivation using innovations and Bayesian approaches, Kalman filter for Gauss-Markov model, Kalman filter design methodology, extended Kalman filters.

PREREQ: ELE 603, ELE 756

ELE 853 - Advanced Topics in Communication Theory
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Typical topics: spread-spectrum techniques, synchronous communications, signal theory, spectral estimation, radar and sonar applications of detection and estimation theory.

PREREQ: ELE 756
Repeatable

ELE 890 - Independent Study
College of Engineering and Computer Science
1-6 credit(s) At least 1x fall or spring
Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by permission of supervising instructor or instructor
and the department.

Repeatable

**ELE 995 - Engineer Degree Project**
*College of Engineering and Computer Science*

0-6 credit(s)

Independent investigation or original research on an engineering problem under supervision of member of the faculty. Credit to be arranged.

Repeatable, 6 credits maximum

**ELE 996 - Master's Project**
*College of Engineering and Computer Science*

0 credit(s) Every semester

An engineering investigation or the analysis and evaluation of a journal paper. A written report is required in accordance with current departmental guidelines. Required of all students electing the nonthesis option for the master's degree.

Repeatable

**ELE 997 - Masters Thesis**
*College of Engineering and Computer Science*

1-6 credit(s) At least 1x fall or spring

Independent investigation on a topic of interest under supervision of a member of the Graduate School faculty. Credits to be arranged.

Repeatable, 6 credits maximum

**ELE 999 - Dissertation for the PhD**
*College of Engineering and Computer Science*

1-15 credit(s) At least 1x fall or spring

Research work on a doctoral dissertation under the supervision of a member of the Graduate School faculty. Credits to be arranged.

Repeatable, 30 credits maximum

### Mechanical and Aerospace Engineering

**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, reactor operation and control; reactor thermo-fluid-dynamics; reactor safety; reactor accident case studies.

PREREQ: NUC 301 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 fiber-reinforced 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 1x 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 1x fall or spring

Crosslisted with: CIE 551


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 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


PREREQ: MAE 251 AND 341

**MAE 587 - Design of Solar Energy System**
*College of Engineering and Computer Science*

3 credit(s) At least 1x 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)
optimization. Knowledge of Linear Algebra and Ordinary Differential Equations required. Matlab used.

**MAE 635 - Advanced Mechanics of Materials**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Stress analysis. Beam-column analysis by series, variational techniques, beams on elastic foundation, torsion with restrained warping, deflections due to transverse shear, introductory problems in plates and shells.  
**PREREQ:** MAE 341 OR CEN 333

**MAE 643 - Fluid Dynamics**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosstlisted with: CEN 643  
Review of undergraduate fluids; kinematics, vorticity; dynamics, stresses, Euler and Navier-Stokes equations; energy, Bernoulli's equation; potential flows; Stokes flows; boundary layers; flow separation; other applications.  
**PREREQ:** MAE 341 OR CEN 333

**MAE 644 - Applied Fluid Dynamics**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Fundamental flow phenomena encountered in practical engineering situations. Topics may include: flow separation, turbulent mixing, bluffbody aerodynamics, three dimensional flow, flow control, high-lift devices, cavitation, fan stall, flow-structure interaction.  
**PREREQ:** MAE 643

**MAE 645 - Fluid Dynamics Measurements**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
**PREREQ:** MAE 643

**MAE 647 - Gas Dynamics**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  

**MAE 648 - Biofluid Dynamics**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Crosslisted with: BEN 648  

**MAE 651 - Advanced Thermodynamics**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Review of thermodynamic laws and macroscopic coordinates of general systems. Reversibility, equilibrium and exergy. Introduction to statistical thermodynamics.  
**PREREQ:** MAE 251

**MAE 655 - Advanced Heat Transfer**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Theory and application of heat transfer by conduction and radiation for both steady and unsteady state conditions. Mathematical, graphical, and numerical methods of solution.  
**PREREQ:** MAE 643

**MAE 656 - Convective Heat and Mass Transfer**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
**PREREQ:** MAE 643

**MAE 658 - Building Environmental Modeling and Simulations**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: CIE 648  
Building environmental analysis; contaminant source and sink models; single-zone, multizone, and computational fluid dynamics models.  
**PREREQ:** MAE 341 AND MAE 355

**MAE 659 - Building Materials and Envelope**  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: CIE 649  
Understanding of heat, air and moisture transfer effects on building envelope/enclosure through linking material properties, assembly design and hygrothermal performance with structural and mechanical considerations. Introduction to advanced computational tools for building enclosures.
MAE 671 - Numerical Methods in Mechanical Engineering  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Derivation and use of numerical methods for polynomial approximation, extraction of roots, evaluation of determinants, eigenvectors and eigenvalues, orthogonal transformations, angles of orthogonal transformation, robotics, differential equations, mechanism analysis, Fourier representation.

MAE 675 - Methods of Analysis in Mechanical Engineering  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Methods of analyzing linear mechanical systems based on theorems in linear algebra, tensor calculus, and linear differential equations. Vector spaces, linear transformations, tensor fields, and eigenvalue problems.

MAE 683 - Applied Environmental Acoustics and Noise Control  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Double Numbered with: MAE 483  
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.

MAE 686 - Advanced Fuel Cell Science and Technology  
*College of Engineering and Computer Science*  
3 credit(s) At least 1x fall or spring  
The scientific challenges of fuel cells will be discussed: fundamental electrochemistry, thermodynamics and kinetics of electrode process, with emphasis on fundamental principles of fuel cells, mass transport processes and performance of fuel cells. Department Consent Required.

MAE 721 - Theory of Elasticity  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  

MAE 723 - Asymptotic Methods for Engineering Applications  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Introduction including problems in vibrations and fluid mechanics. Regular and singular perturbations; asymptotic matching. Boundary value problems; distinguished limits. Multiple scale expansions, WKB theory.

MAE 731 - Bending of Plates and Shells I  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
PREREQ: MAE 635

MAE 735 - Buckling Problems  
*College of Engineering and Computer Science*  
3 credit(s)  
Physical and mathematical aspects of buckling. Analysis of elastic buckling phenomena for columns, beams, arches, rings, plates, and shells under various loading and support conditions. Buckling due to thermal stress, inelastic buckling, creep buckling.  
PREREQ: MAE 635

MAE 741 - Fundamentals of Turbulence  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Qualitative description, main parameters and scaling variables; similarity analysis of mixing layers, jet boundary layers, pipe flows; extension to transport and mixing with emphasis on K-E models.  
PREREQ: MAE 643

MAE 746 - Viscous Fluids  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
PREREQ: MAE 643

MAE 765 - Combustion Phenomena in Engineering  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
PREREQ: MAE 651

MAE 771 - Computational Fluid Mechanics  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Numerical solutions using finite difference methods and other techniques. Principles of approximations; accuracy considerations. Applications including boundary-layer and potential flow solutions.

MAE 785 - Continuum Mechanics  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  

MAE 849 - Advanced Topics in Fluid Mechanics  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Topics dealing with fluid flow, such as theories of turbulence, jets, wakes, cavities, magnetohydrodynamics.  
Repeatable 1 time(s), 6 credits maximum

MAE 879 - Advanced Topics in Mechanical Design  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Selected topics dealing with problems in mechanical design, such as theory of lubrication and bearings, balancing problems, high-speed mechanisms.  
Repeatable 1 time(s), 6 credits maximum

MAE 889 - Selected Topics  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Selected topics dealing with the theory and design of steam and gas turbines, centrifugal and axial flow compressors.  
Repeatable 1 time(s), 6 credits maximum

MAE 990 - 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

MAE 994 - Capstone Project  
*College of Engineering and Computer Science*  
0 credit(s)  
Review technical papers or reports in the open literature related to student’s field of interest. Students prepare oral presentation to the
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<th>Course Code</th>
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<td>Principles of Turbomachines</td>
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<td>PREREQ: MAE 685, MAE 585</td>
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<td>Fluid dynamics and thermodynamics of turbomachines. Performance characteristics</td>
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<td>and analysis of axial and radial turbomachines. Cascade theory. Radial</td>
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<td>MEE 725</td>
<td>Advanced Engineering Dynamics</td>
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<td>Newton's laws of motion. Motion of a particle; a rigid body. Work and</td>
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<td>energy. Theorem of virtual displacements. D'Alembert's principle. Generalized</td>
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<td>MEE 775</td>
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<td>Continuation of MEE 725. Analysis of mechanical and hydraulic control systems</td>
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<td>of linear and nonlinear characteristics. Stability criteria in systems</td>
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<td>subject to self-induced vibrations. Operational calculus and Laplace</td>
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<td>transforms for linear systems of one and two degrees of freedom.</td>
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<td>MEE 637</td>
<td>Mechanics of Heterogeneous Solids</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
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<td>PREREQ: MEE 725</td>
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<td>Effective elastic moduli of composite materials. Bounds on effective moduli.</td>
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<td>Classical analysis of laminated plates. Higher order laminated plate theory.</td>
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<td>Wave propagation. Inelastic and nonlinear effects.</td>
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<td>MEE 524</td>
<td>Microprocessors in Mechanical and Manufacturing Engineering</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
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<td>PREREQ: MEE 184 AND MAT 485</td>
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<td>Introduction to the microprocessor and its various configurations used in</td>
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<td>controlling machine operations, data acquisition, etc. Project-oriented work</td>
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<td>involving program development in machine, assembly, and basic languages.</td>
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<td></td>
<td>Micro-computers used for off-line program development. Not open to electrical</td>
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<td></td>
<td></td>
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<td>and computer engineering students.</td>
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<tr>
<td>MEE 571</td>
<td>Computer Aided Design</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>At least 1</td>
<td>PREREQ: MEE 184 AND MAT 485</td>
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<td>fall or spring</td>
<td>Use CAD software and hardware in the solution of mechanical engineering</td>
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<td>problems. Computer graphics, computer aided geometry (space curves, splines,</td>
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<td>patches) design, solid modeling, optimization and an introduction to finite</td>
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<td>element method.</td>
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<td>MEE 584</td>
<td>Noise from Industrial Flow Systems</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>Irregularly</td>
<td>PREREQ: MEE 584</td>
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<td>Basic fluid mechanics and acoustics. Noise generation by fluid flows and their</td>
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<td>interaction with solid bodies. Types of noise sources. Analysis and control of</td>
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<td>such flow noise sources in manufacturing, transportation, propulsion, power</td>
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<td>generation, and industrial control systems.</td>
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<td>MEE 585</td>
<td>Fuel &amp; Energy Utilization</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>Irregularly</td>
<td>PREREQ: MEE 585</td>
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<td>Multiple controller servomechanisms.</td>
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<tr>
<td>MEE 825</td>
<td>Theory of Plasticity</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
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<td>PREREQ: MEE 825</td>
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<td>Basic behavior of materials and formulation of laws governing plastic flows.</td>
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<td>Different inelastic behaviors of metals. Yielding and the yielding loci.</td>
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<td>Strain hardening laws. Complete stress-strain relations. Total strain theory</td>
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<td>Variational principles. Plastic anisotropy.</td>
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<td>MEE 829</td>
<td>Advanced Topics in Dynamics</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>Irregularly</td>
<td>PREREQ: MEE 829</td>
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<td>Selected topics dealing with dynamics of rigid bodies, vibration and stability</td>
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<td>of linear systems.</td>
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<td>MEE 856</td>
<td>Advanced Topics in Heat Transfer</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>Irregularly</td>
<td>PREREQ: MEE 856</td>
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<td>Selected topics in heat transfer. Boiling, condensation, melting, ablation,</td>
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<td>rarified gas flow, liquid metals, cooling of electronic components.</td>
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<td>MEE 859</td>
<td>Advanced Topics in Thermodynamics</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>Irregularly</td>
<td>PREREQ: MEE 859</td>
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<td>Selected topics in classical and statistical thermodynamics of interest to</td>
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<td>mechanical and aeronautical engineers.</td>
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<td>MEE 885</td>
<td>Advanced Topics in Thermal Engineering</td>
<td>College of Engineering and Computer Science</td>
<td>3</td>
<td>Irregularly</td>
<td>PREREQ: MEE 885</td>
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<td>Selected topics in theory and design of equipment and plants for power</td>
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<td>generation, air conditioning, refrigeration, water purification, and other</td>
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<td>thermal engineering application.</td>
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Selected topics in theories of elasticity, plasticity, and rheology, such as finite strain theory, elastic and plastic waves, anisotropic bodies, special mathematical techniques.

PREREQ: MAE 721
Repeatable 1 time(s), 6 credits maximum

MEE 990 - Independent Study
College of Engineering and Computer Science
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

MEE 996 - Special Projects
College of Engineering and Computer Science
1-6 credit(s) Every semester
Repeatable

Manufacturing Engineering

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

MFE 633 - Enterprise Systems
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Crosslisted with: IST 633
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
PREREQ: ECS 526 OR IST 659

MFE 634 - Productivity and Quality Engineering
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Measuring, evaluating and improving productivity in conjunction with total quality methods. Multidimensional measures of performance. Quality function deployment, concurrent engineering, loss function; system, parameter and tolerance design using statistically designed experiments. Statistical quality control overview.
PREREQ: ECS 526

MFE 635 - Manufacturing Systems
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Survey of different types of manufacturing systems and design methodologies. Topics include transfer line, flow shops, job shops, manufacturing cells, flexible manufacturing systems, and computer integrated manufacturing systems. Integration of manufacturing components and emerging trends.
PREREQ: ECS 526

MFE 636 - Materials and Processing in Manufacturing
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Properties of metals, polymers, ceramics; mechanics and mechanisms of deformation processing, manufacturing processes. Laboratory demonstrations.

MFE 639 - CAD/CAM Systems
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring

MFE 654 - Production System Design and Control
College of Engineering and Computer Science
3 credit(s) At least 1x fall or spring
Introduction to design, planning, execution, and control of production systems using mathematical, computational, and other modern techniques. Forecasting, inventory control, lean manufacturing, materials requirement planning, enterprise resource planning, and supply chain planning.
PREREQ: ECS 526

MFE 676 - Computer Control of Machines and Processes
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Application of microcomputers, programmable controllers, numerical controls, analog-digital conversion, robotics, software development, laboratory experiments.

MFE 692 - Design for Manufacturing
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
Major design project which would include initial design definition, analysis/CAD, manufacturability studies, design modification, manufacturing layout and data bases.
PREREQ: MFE 636

MFE 735 - Artificial Intelligence in Manufacturing Systems
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest
PREREQ: MFE 635

MFE 850 - Advanced Topics in Manufacturing
College of Engineering and Computer Science
3 credit(s) Irregularly
Selected topics in conventional and non-conventional manufacturing processes, flexible manufacturing cell, automated manufacturing, production planning, quality control.
Repeatable 1 time(s), 6 credits maximum

MFE 997 - Master's Thesis
College of Engineering and Computer Science
0-9 credit(s)
Repeatable
Materials Science

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

MTS 625 - Topics in Solid-State Thermodynamics
College of Engineering and Computer Science
3 credit(s) Irregularly
Application of classical and statistical thermodynamic principles to the behavior of solids. Phase equilibria, diffusion, defects, interfaces, use of tabulated data in real problems, elastic, magnetic, and electric systems.

MTS 631 - Advanced Physical Metallurgy
College of Engineering and Computer Science
3 credit(s) Irregularly

MTS 632 - Transformations in the Solid State
College of Engineering and Computer Science
3 credit(s) Irregularly
Reactions and transformations in solids. Allotropy, critical phenomena in solid solutions, nucleation, growth, precipitation from supersaturated solid solutions, recovery, recrystallization and growth, eutectoid transformations. Martensite transformations, etc.

MTS 655 - Electron Transport Phenomena in Crystals
College of Engineering and Computer Science
3 credit(s) Upon sufficient interest

MTS 671 - Mechanical Behavior of Materials
College of Engineering and Computer Science
3 credit(s) Irregularly

MTS 672 - Dislocation Theory
College of Engineering and Computer Science
3 credit(s) Irregularly

MTS 682 - Electron Diffraction and Electron Microscopy
College of Engineering and Computer Science
3 credit(s) Irregularly
Kinematic theory of electron diffraction and microscopy. Dynamics theory. Contrast from perfect and imperfect crystals. Specimen preparation and experimental methods. PREREQ: MTS 581

MTS 684 - Modern Microstructural Techniques
College of Engineering and Computer Science
3 credit(s) Irregularly
Crosslisted with: SST 684
Basic principles, capabilities and applications of various microstructural methods not covered in MTS 581 and MTS 682. Scanning electron microscopy, electron probe microanalysis, X-ray fluorescence, field ion microscopy. PREREQ: MTS 581

MTS 720 - Formation of Thin Solid Films
College of Engineering and Computer Science
3 credit(s) Irregularly
Science and engineering of the formation of thin solid films. Vacuum technology, film formation, theories of nucleation and accommodation, growth and structure of single crystal films. Repeatable

MTS 721 - Properties of Thin Solid Films
College of Engineering and Computer Science
3 credit(s) Irregularly
Topics chosen principally from: mechanical, piezoelectric, magnetic, electron transport, superconducting, and optical properties.

MTS 748 - Theory of Alloys
College of Engineering and Computer Science
3 credit(s) Irregularly
Topics chosen principally from: mechanical, stability and reactivity of alloy phases, intermetallic compounds, carbides, nitrides, etc. Topics covered include valence bond theory, crystal field theory, Engel-Brewer correlation as well as other periodic classifications of properties which are of value in making the above types of predictions.

MTS 756 - Magnetic Phenomena in Crystals
College of Engineering and Computer Science
3 credit(s) Irregularly
Orbital magnetic susceptibility, spin paramagnetism, ferro, ferrim, antiferromagnetism, exchange interaction, Ising model, domain structure, fine particles, thin films, magnetic anisotropy, reversible and irreversible magnetization processes. PREREQ: MTS 631

MTS 800 - Selected Topics in Mechanics of Materials
College of Engineering and Computer Science
1-6 credit(s) Irregularly
Imperfections in solids, fracture and yielding criteria, fatigue, creep, ultrasonic effects, radiation damage, surface phenomena and related subjects of current interest. Repeatable

MTS 820 - Selected Topics in Materials Science
College of Engineering and Computer Science
1-4 credit(s) At least 1x fall or spring
Recent developments in the field of materials science. Repeatable
MTS 837 - Advanced Problems in the Physics of Metals  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Quantitative treatment of the theory of the properties of metals and alloys.  
*PREREQ:PHY 662*  

MTS 867 - Theory of Surfaces and Interfaces  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Fundamental theory of the interfaces formed between various combinations of solids, liquids, and gases based on the thermodynamic and electronic models. Phenomena of adsorption, capillarity, catalysis, electronic emissions, double layer effects, and heterojunctions.  

**MTS 890 - Metallurgical Research Techniques**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Topics selected from the following and related areas: high and low temperature research, high vacuum, high pressure experimental stress analysis, quantitative metallography, nondestructive testing, electron microscopy, mass spectrometry, X-ray and electron diffraction.  
Repeatable 1 time(s), 6 credits maximum  

**MTS 960 - Advanced Seminar in Materials Science**  
*College of Engineering and Computer Science*  
3 credit(s) Upon sufficient interest  
Recent scientific and engineering advances in specific fields of materials science.  
Repeatable  

**MTS 997 - Masters Thesis**  
*College of Engineering and Computer Science*  
1-6 credit(s) Upon sufficient interest  

**MTS 999 - Dissertation**  
*College of Engineering and Computer Science*  
1-15 credit(s)  
Repeatable  

**Nuclear Energy Track**  

**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 1x 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.  

**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)*  

**Solid-State Science and Technology**  

**SST 684 - Modern Microstructural Techniques**  
*College of Engineering and Computer Science*  
3 credit(s) Irregularly  
Crosslisted with: MTS 684  
Basic principles, capabilities and applications of various microstructural methods not covered in MTS 581 and MTS 682. Scanning electron microscopy, electron probe microanalysis, X-ray fluorescence, field ion microscopy.  
*PREREQ: MTS 581*  

**SST 820 - Selected Topics in Solid-State Science and Technology**  
*College of Engineering and Computer Science*  
1-4 credit(s) Upon sufficient interest  
Recent developments in the field.  
Repeatable  

**SST 990 - Independent Study**  
*College of Engineering and Computer Science*  
1-6 credit(s) Every semester  
Exploring a problem or problems in solid-state science. Individual independent study upon plan submitted by student.  
Repeatable  

**SST 997 - Masters Thesis**  
*College of Engineering and Computer Science*  
0-6 credit(s)  
Repeatable  

**SST 999 - Dissertation**  
*College of Engineering and Computer Science*  
1-15 credit(s)  
Repeatable  

**Other Courses**  

**CIE 600 - Environmental Assessment**  
3 credit(s)  

**MFE 629 - Modeling and Optimization Techniques**  
*Crosslisted with: ECS 629*  

**SST 990 - Independent Study**  
*College of Engineering and Computer Science*  
1-6 credit(s) Every semester  
Exploring a problem or problems in solid-state science. Individual independent study upon plan submitted by student.  
Repeatable  

**SST 997 - Masters Thesis**  
*College of Engineering and Computer Science*  
0-6 credit(s)  
Repeatable  

**SST 999 - Dissertation**  
*College of Engineering and Computer Science*  
1-15 credit(s)  
Repeatable
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 phenomenon. The iSchool at Syracuse University, 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 continually updated to meet future industry trends and incorporates rapidly changing technologies.

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 focuses on how organizations interact with each other and exchange 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 use 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.J. 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
- Information Management, MS (Executive Track)
- 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

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 is 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.

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 global companies, governments, and organizations 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 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 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
Our Values

To expand human capabilities through information.

Our Vision

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 cross-unit collaborations, however, research centers and laboratories provide a venue that supports long-term 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, and Internet protocol version 6.
- Center for Digital Literacy CDL is an interdisciplinary, collaborative research and development center 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, CISTR 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-the-art classrooms, research centers, and a student lounge and cafe.

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 our signature computer lab, featuring dual display screens for increased productivity in a variety of computer applications.
- iTELL (Information Technology Experiential Learning Lab)-Students get hands-on 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 School’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 merges physical space for co-working and hosting events, and a resource hub supporting 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 iSchool's 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.

Graduate Education

At the School of Information Studies (iSchool), we view information as a resource that can and should be managed. We seek ways to use existing and emerging technologies to facilitate the efficient transfer of information from corporate files, libraries, or digital storage devices to the people and organizations needing it. As a professional school, the iSchool prepares graduates for careers as managers and information professionals who will oversee the development and use of this resource.

Information studies must also consider the rapid changes in computer and telecommunications technologies that have profoundly affected the way information is stored, processed, transmitted and consumed. And, because we believe that information is to be used, information studies must include aspects of the social sciences in order to temper technical knowledge with a thorough understanding of how people and organizations seek and use information.

The iSchool at Syracuse is committed to preparing technically sophisticated information managers who understand that information is an essential resource for people and organizations that must be used and managed effectively. As the first school in the country to offer a master's degree in information management, Syracuse University is a leading center in defining both the theory and practice of information management.

Online Course Delivery

Since 1993, the iSchool at Syracuse University has been offering high quality graduate level online learning opportunities to students around the world. Each year, students representing a broad range of professional, cultural, and academic experiences; ages, and geographic locations join the School online education programs. With limited residencies (for non-executive track masters programs), no full-time enrollment requirements and asynchronous course delivery, iSchool students can learn virtually anytime, anywhere, earning a Syracuse University degree with flexible study schedules and no need to relocate.

The iSchool is dedicated to ensuring quality in campus and online learning programs. iSchool online graduate programs attract some of the best professionals in their related fields and the online classroom becomes an environment that enhances engagement and expands professional networks. Graduates emerge prepared to excel in the information profession of their choice.

All master's and certificates of advanced study programs (with the exception of the eGovernment Management and Leadership, Cultural Heritage Preservation, and School Media certificate programs) offered by the iSchool can be completed on campus or in an online learning format. Each online program has the same curriculum, faculty, academic calendar, and tuition as their respective campus program. Online courses are of the same academic rigor as on-campus courses, and every effort is made to ensure that the academic experience is of equally excellent quality for both online and campus students. The only difference is the delivery mode.

Graduates of the School of Information Studies online programs receive the same degree as their campus counterparts.

Helen Benning Regnier Summer Institute

The iSchool also offers graduate level courses each summer through the Regnier Summer Institute. The Institute's flexible structure enables the iSchool to offer special topics, experimental, and intensive courses for incoming and current students as well as working professionals looking to brush up their skills.

Participants have the option of registering for short intensive, on-campus courses for credit or auditing classes on campus, online, or in a limited residency format. Courses are open to non-matriculated and matriculated graduate students. Regnier Institute courses traditionally take place on campus in an intensive 9 a.m. to 5 p.m. one-week format. Additionally, the iSchool offers several online summer courses which meet asynchronously over several weeks.

Executive Education

The School of Information Studies is dedicated to expanding the capabilities of people who are at all stages in their professional development. The executive education programs at the iSchool focus on preparing mid- to upper-level managers for senior leadership positions and for advancing their organizations to new tiers of achievement.

The iSchool offers a variety of programs for working professionals looking to boost their careers—through a formal degree program, certificate of advanced study programs, certification programs, or short topic-driven seminars, workshops, symposia, or similar event-based experiences. This range of options allows individuals to choose brush up on their skills or delve into a subject area more intensively. Our executive education programs can be completed online or on campus on a full-time or part-time basis.

Programs created specifically for the executive track include:

- Executive M.S. in Information Management-

The selective, 30-credit hour Executive Information Management (IM) program combines technology, policy, security, and management. The program's unique curriculum and experiential learning opportunities shape students' understanding of technology and management with a practical understanding of their roles within organizations. The distinctive educational program has earned domestic and international recognition and praise.

- Information Management, DPS - The exclusive, 51-credit, part-time Doctorate of Professional Studies in Information Management program is for working professionals interested in leadership and applied research in the information field. This 36-42 month program prepares innovators to be the catalyst for positive change within their organizations. The program is designed for elite information professionals whose career trajectory is directed to taking on visible leadership in professional practice. This highly selective, nontraditional doctoral program accepts students who can establish powerful working partnerships between the iSchool and their own organizations.

Mid-career professionals seeking to develop expertise in one of the following areas can enroll in a Certificate of Advanced Study program.

The iSchool at Syracuse is committed to helping organizations and their employees achieve lifelong learning goals, and in finding ways to keep an organization's knowledge and skills up-to-date. Since many of the iSchool faculty members are experienced in business, they know that balancing a career and life can be a challenge. So, they can work with your organization in several ways at all degree levels:

- Numerous weekly and evening classes
- A complete online curriculum alternative
- Consideration for life experience
- Custom non-credit workshops
- Professional certifications

The iSchool assists companies in meeting long-term industry challenges by developing new courses in innovative subjects or delivery methods unique to specific companies.

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.

Computational Linguistics, MS

Computational Linguistics
Gerald Greenberg
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Faculty
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Computational Linguistics (also called Natural Language Processing, abbreviated as NLP) is a field of vital importance in the information age. With growing amounts of speech and text data, the demand keeps increasing for automated tools to understand human language and NLP specialists to develop and operate these tools.

In industry, Computational Linguistics techniques are being widely used in search engines, digital libraries, speech recognition systems, and data mining toolkits. The leading data analysis companies like SAS and SPSS all have added text analysis components to their products. Many open-source NLP toolkits have also been available. Companies with large amount of text data need NLP specialists to develop in-house tools or use off-the-shelf tools to analyze their corpora.

Computational Linguistics also plays a critical role in the latest data-driven scholarship in computational social sciences and digital humanities. Humanist scholars and social scientists are increasingly using large corpora to make robust inferences in their research. Scientific literature, government documents, and user-generated content in social media are just a few examples of commonly used corpora. Students and scholars in sociology, journalism, and communication fields also need to learn to use NLP tools to slice and dice large document collections, identify the main themes and opinions of different parties.

Syracuse University is home to the Syracuse University Forensic and National Security Science Institute (FNSSI), which provides critical leadership for the protection of our nation in the areas of defense and security. The tools and techniques described above are also widely used in national defense and security agencies, as well as law enforcement agencies at the local, national, and international levels. The knowledge of such tools and their development and use is becoming more critical to employees in these fields, which is another reason SU is a strong candidate for a computational linguistics program.

Requirements:
In order to receive the Masters of Science in Computational Linguistics, students must complete at least 36-credit hours of coursework, which includes 3 or 6 credits in an internship, and earn a cumulative grade point average of at least 3.0. Nine courses (five 3-credit LIN courses in linguistics, two 3 credit CPS courses in computational science, and two 3 credit IST courses in information studies) plus a 3 or 6 credit IST internship, all offered on a yearly basis, will be required of all those interested in receiving the degree. The first of these courses, LIN 601 - Introductory Linguistic Analysis, will provide essential grounding in the mechanics of language, e.g., the sound system, word structure, sentence structure, and meaning. Through the use of examples from a range of languages, students will learn about similarities and differences across languages, which will allow them to understand the various possible manifestations of natural language. LIN 641 - Syntactic Analysis, LIN 651 - Morphological Analysis, and LIN 611 - Semantics of Human Languages, build on the principles learned in LIN 601 to provide students with a deeper understanding of the three areas of linguistics that are most important to the field of computational linguistics. LIN 741 - Advanced Syntax, builds upon the principles of syntactic analysis which are introduced in LIN 641.

Two additional required courses are in information studies: The foundational courses IST 657 - Basics of Information Retrieval Systems and IST 664 - Natural Language Processing/CIS 668 - Natural Language Processing. A third required course is the internship course IST 971. This internship can be taken for three or six credits, if taken for three credits, an elective from the courses below for three credits needs to be added. IST 657 - Basics of Information Retrieval Systems, will provide fundamental knowledge in information representation, information seeking behavior, query and document matching, relevance measure, search interface design, and information retrieval system evaluation. IST 664 - Natural Language Processing, introduces concepts and methods in processing text at syntactic, semantic, and pragmatic levels. It covers techniques of tokenizing, sentence splitting, part-of-speech tagging, and parsing.

Additional Information

Two additional required courses are in computational science CPS 681 - Explorations in Computing and Programming and CPS 688 - Algorithms for Computational Journalism and Linguistics. Students who demonstrate sufficient knowledge in these areas may test out of the courses and replace them with elective courses from the list below.

Elective Courses.
The courses that follow are generally offered yearly. Students can select among them in completing the remaining credits required for completion of the degree, based on professional need and academic interest. Substitutions may be made with the permission of the director of the degree program.
• CIS 666 - Expert Systems 3 credit(s) or
• CSE 683 - Expert Systems 3 credit(s)
• CIS 667 - Introduction to Artificial Intelligence 3 credit(s) or
• CSE 684 - Introduction to Artificial Intelligence 3 credit(s)
• CIS 626 - Theoretical Foundations of Computer Science 3 credit(s)
• CIS 623 - Structured Programming and Formal Methods 3 credit(s)
• CSD 616 - Introduction to Applied Phonetics 3 credit(s)
• LIN 631 - Phonological Analysis 3 credit(s)
• LIN 612 - Pragmatics: Meaning and Context 3 credit(s)
• PHI 651 - Logic and Language 3 credit(s)
• IST 631 - Theory of Classification and Subject Representation 3 credit(s)
• IST 638 - Indexing and Abstracting Systems and Services 3 credit(s)
• IST 649 - Human Interaction with Computers 3 credit(s)
• IST 565 - Data Mining 3 credit(s)
• IST 736 - Text Mining 3 credit(s)

Admission requirements:
• Completed Syracuse University Graduate School Application
• Resume
• Personal Statement - include background and interest in the program
• Official transcripts - from graduate and undergraduate studies
• 3 Letters of Recommendation
• Application Fee
• GRE Scores: Required
• TOEFL Scores: 580 (written test), 237 (computer-based test), 92-93 (internet-based test) minimum for unconditional admissions

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Learning Outcomes:
IM graduates have a diverse set of skills that enable them to participate at all levels of information technology management. They are expected to acquire competencies in the following:

- **Management of Technology:** Students will be able to integrate technical and solution development concepts with the principles of management, strategy, and financial analysis. Students will be able to apply these concepts in the analysis of complex management case studies and problems. Students will be able to analyze, compare, evaluate, and clearly articulate the relative value of IT investment alternatives.
- **Management of Solution Development:** Students will be able to employ their knowledge and comprehension of information-related disciplines in the development of information system solutions. These disciplines include systems analysis and design, project management, IT procurement, and user analysis. Students will be able to apply these disciplines to the solution of organizational and business problems.
- **Technical Knowledge:** Students will be able to describe operation and use of information and communication technologies, including database management systems, networks, operating systems, information security, and Internet technologies. Students will be able to apply these technologies to solve information problems at the individual and organizational levels.
- **Organizational Context of IM:** Students will be able to articulate the environmental forces that affect the application of IT solutions. Such forces include demographic, social, economic, and ethical factors, as well as local, national, and international information policy and regulation.
- **Evolution of the IM Field:** Students will be able to use their knowledge of the history and current state of the management of information technology to create and evaluate plausible scenarios for the future evolution of technology and the field.
- **Professional Communication Skills:** Students will be able to demonstrate the application of principles, norms, and practices governing professional communication in their field through developing and delivering effective professional communications.
- **Leadership and Teamwork Development:** Students will be able to demonstrate the principles of leadership, followership, and effective collaboration in both co-located and virtual team contexts.
- **Information Literacy, Analysis, and Problem Solving:** Students will be able to find, organize, manage, evaluate, and use information resources effectively for the solution of professional problems.

Curriculum:
The 42-credit curriculum includes a 10-credit primary core requirement, a 15-credit secondary core requirement across three core areas, 8 to 14 credits of electives, and a 3 to 9 credit exit requirement. Listed below are guidelines for credit reductions and substitutions on the basis of the students professional full-time work experience. The master's degree program must be completed within seven years although most students complete the degree in two years. The program is available to part-time and distance students and can be completed at the student's own pace through evening, short courses, and online delivery.

(Courses, other than those listed below, may apply to the Secondary Core. Students should review the full iSchool curriculum and make requests for substitutions, as appropriate. Students should consult the Program Director for these requests.)

The program includes three components:

**I. Primary Core (10 credits)**
- IST 601 - Information and Information Environments 1 credit(s)
- IST 614 - Management Principles for Information Professionals 3 credit(s)
- IST 618 - Information Policy 3 credit(s)
- IST 621 - Introduction to Information Management 3 credit(s)

**II. Secondary Core (15 credits)**
- IST 619 - Applied Economics for Information Managers 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 654 - Information Systems Analysis 3 credit(s)

**Technological Infrastructure Track (6 credits)**
- IST 639 - Enterprise Technologies 3 credit(s)
- IST 653 - Telecommunications and Enterprise Network Management I 3 credit(s)
- IST 659 - Data Administration Concepts and Database Management 3 credit(s)

**User Information Needs Track (3 credits)**
- IST 553 - Information Architecture for Internet Services 3 credit(s)
- IST 617 - Motivational Aspects of Information Use 3 credit(s)
School of Information Studies

Contact:
Carsten Oesterlund, Program Director, 309 Hinds Hall, 315-443-2911, igrad@syr.edu

Website:
Information Management for Executives

Overview:
The Master of Science in Information Management for Executives at the Syracuse University School of Information Studies (iSchool) is a 30-credit degree program that offers the our MS in Information Management degree at a reduced course load to students with six or more years of appropriate full-time, professional experience in the information management field.

The iSchool's Information Management for Executives program offers:

- **Flexibility.** Earn the degree completely online, take classes on campus, or combine the two to perfectly fit your schedule.
- **Quality.** Take classes from the same accomplished faculty who teach in our 42-credit Master's in Information Management program.
- **Individuality.** Tailor your coursework to fill knowledge gaps, or deepen your existing knowledge to develop a specialty.
- **Marketability.** Add a degree from the No. 1 ranked school in information systems to your resume.

Our Executive IM program will confer a Master's of Science in Information Management

This degree program can be completed on campus, online, or through a combination of both options. Students take the same classes and elarn from the same accomplished faculty members who teach in the 42-credit hour program. They can tailor their coursework to fill knowledge gaps or deepen their existing knowledge to develop a specialty.

To be eligible for the executive program, applicants must be strong candidates for leadership roles in the information Management field, as demonstrated by at least six years of relevant experience and a record of continuingly increasing job responsibilities.

Curriculum:
The 30-credit curriculum for students in the MS in Information Management: Executive Track will be determined in collaboration with an academic advisor and the program director, and includes:

- **Primary Core (9 credits)**
- **Secondary Core (9 credits)**
- **Electives (9 credits)**
- **Exit Requirement (3 credits)**

With the advisor's and program director's approval, qualified students may substitute advanced courses for introductory primary and secondary core courses.

(Courses, other than those listed below, may apply to any track. Students should review the full iSchool curriculum and make requests for substitutions, as appropriate. Students should consult the Program Director for these requests.)

I. Primary Core (9 credits)

Management and Financial Track
- IST 619 - Applied Economics for Information Managers 3 credit(s)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 683 - Managing Information Technology-Enabled Change 3 credit(s)
- IST 726 - Enterprise Architecture: Concepts and Practice 3 credit(s)
- IST 727 - Information Technology Capital Planning 3 credit(s)
- IST 745 - Project Portfolio and Program Management 3 credit(s)

Policy Track
- IST 618 - Information Policy 3 credit(s)
- IST 686 - Social Media in the Enterprise 3 credit(s)
- IST 711 - e-Government 3 credit(s)
- IST 728 - Information Security Policy 3 credit(s)
- IST 735 - Copyright for Information Professionals 3 credit(s)

II. Secondary Core (9 credits)

Systems Solution Track
- IST 585 - Knowledge Management 3 credit(s)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 654 - Information Systems Analysis 3 credit(s)
- IST 679 - Electronic Commerce Technologies 3 credit(s)
- IST 683 - Managing Information Technology-Enabled Change 3 credit(s)
- IST 711 - e-Government 3 credit(s)
- IST 726 - Enterprise Architecture: Concepts and Practice 3 credit(s)
- IST 745 - Project Portfolio and Program Management 3 credit(s)

Guidelines for Credit Reductions and Substitutions

- Student with one to three years of full-time professional IT experience in the Information Technology field may substitute the internship requirement for another 3-credit course with approval of the IM Program Director, and requires joining-leaving letters and your resume, which may be audited.
- Students with a minimum of three years of full-time work experience in the IT field may petition with the IM Program Director to reduce the credit requirement of the program by three credits, substituted by work experience, which requires joining-leaving letters and your resume, which may be audited.

Executive Track

Master of Science in Information Management for Executives

- IST 631 - Theory of Classification and Subject Representation 3 credit(s)
- IST 641 - User-Based Design 3 credit(s)
- IST 649 - Human Interaction with Computers 3 credit(s)
- IST 656 - Telecommunications and Enterprise Network Management II 3 credit(s)
- IST 662 - Instructional Strategies and Techniques for Information Professionals 3 credit(s)

III. Electives (8 to 11 credits)

All iSchool courses are acceptable electives. In addition, students are allowed to take up to 6 credits of certain courses from other schools at Syracuse University (such as the Whitman School of Management and the College of Engineering and Computer Science) as electives toward their MS/IM program.

IV. Exit Requirement (3 to 9 credits)

- IST 755 - Strategic Management of Information Resources 3 credit(s)
  * As the capstone course, IST 755 must be taken after the completion of IST 614 and at least 24 credits in the degree program.
- IST 971 - Internship in Information Studies 1-6 credit(s)
  * For students with little or no appropriate experience as information professionals, students must register for at least 2 credits and no more than 6 credits of internship or cooperative education credits.

Contact:
Carsten Oesterlund, Program Director, 309 Hinds Hall, 315-443-2911, igrad@syr.edu

Website:
Information Management for Executives

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The iSchool's Information Management for Executives program offers:

- **Flexibility.** Earn the degree completely online, take classes on campus, or combine the two to perfectly fit your schedule.
- **Quality.** Take classes from the same accomplished faculty who teach in our 42-credit Master's in Information Management program.
- **Individuality.** Tailor your coursework to fill knowledge gaps, or deepen your existing knowledge to develop a specialty.
- **Marketability.** Add a degree from the No. 1 ranked school in information systems to your resume.

Our Executive IM program will confer a Master's of Science in Information Management

This degree program can be completed on campus, online, or through a combination of both options. Students take the same classes and elarn from the same accomplished faculty members who teach in the 42-credit hour program. They can tailor their coursework to fill knowledge gaps or deepen their existing knowledge to develop a specialty.

To be eligible for the executive program, applicants must be strong candidates for leadership roles in the information Management field, as demonstrated by at least six years of relevant experience and a record of continuingly increasing job responsibilities.

Curriculum:
The 30-credit curriculum for students in the MS in Information Management: Executive Track will be determined in collaboration with an academic advisor and the program director, and includes:

- **Primary Core (9 credits)**
- **Secondary Core (9 credits)**
- **Electives (9 credits)**
- **Exit Requirement (3 credits)**

With the advisor's and program director's approval, qualified students may substitute advanced courses for introductory primary and secondary core courses.

(Courses, other than those listed below, may apply to any track. Students should review the full iSchool curriculum and make requests for substitutions, as appropriate. Students should consult the Program Director for these requests.)

I. Primary Core (9 credits)

Management and Financial Track
- IST 619 - Applied Economics for Information Managers 3 credit(s)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 683 - Managing Information Technology-Enabled Change 3 credit(s)
- IST 726 - Enterprise Architecture: Concepts and Practice 3 credit(s)
- IST 727 - Information Technology Capital Planning 3 credit(s)
- IST 745 - Project Portfolio and Program Management 3 credit(s)

Policy Track
- IST 618 - Information Policy 3 credit(s)
- IST 686 - Social Media in the Enterprise 3 credit(s)
- IST 711 - e-Government 3 credit(s)
- IST 728 - Information Security Policy 3 credit(s)
- IST 735 - Copyright for Information Professionals 3 credit(s)

II. Secondary Core (9 credits)

Systems Solution Track
- IST 585 - Knowledge Management 3 credit(s)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 654 - Information Systems Analysis 3 credit(s)
- IST 679 - Electronic Commerce Technologies 3 credit(s)
- IST 683 - Managing Information Technology-Enabled Change 3 credit(s)
- IST 711 - e-Government 3 credit(s)
- IST 726 - Enterprise Architecture: Concepts and Practice 3 credit(s)
- IST 745 - Project Portfolio and Program Management 3 credit(s)
Library and Information Science, MS

Contact:
Jill Hurst-Wahl, Program Director, 208 Hinds Hall, (315) 443-1070, igrad@syr.edu

Website:
Library & Information Science

Overview:
As part of the School of Information Studies, the Library and Information Science (LIS) program provides thorough grounding in the knowledge, skills, and values of librarianship within the context of an interdisciplinary faculty. LIS coursework stresses both the theory and practice of library science. It includes educational opportunities beyond formal coursework through one-on-one interaction with the faculty; hands-on learning in libraries and information centers; exposure to leaders in the profession; and direct participation in research projects. The program is offered in both campus and distance learning formats and can be completed on a full-time or part-time basis. Our LIS program graduates librarians who are prepared to assume leadership roles in the libraries, information centers, and the broader information environment.

Three themes run through the LIS curriculum:
- Focus on the users of library and information services. Keeping the needs of users-and potential users-of library and information services in the foreground is a fundamental value of librarianship.
- Use technology to provide exemplary library and information services. Librarians need to be able to use technology effectively to provide quality library and information services.
- Manage information services and systems. Librarians in the 21st century must be competent managers of information, capable of innovation, efficiency, and leadership to meet the needs of their clientele.

Curriculum:
The 36-credit LIS curriculum is designed to prepare librarians who have the broad range of knowledge and skills needed for exemplary practice in the library and information profession. Students in the School Media Program should consult the School Media specific curriculum, as there are no electives due to each course being required to meet NY State Education Department requirements for certification.

I. Core Knowledge and Skills (19 credits)
LIS core courses provide a solid grounding in the knowledge, skills, and values of the library and information profession. The 19-credit LIS core has three parts:

Introductory Core (4 credits)
- IST 511 - Introduction to the Library and Information Profession 3 credit(s) (gateway course)
- IST 601 - Information and Information Environments 1 credit(s)

Information Resources Core (9 credits)
- IST 605 - Reference and Information Literacy Services 3 credit(s)
- IST 613 - Library Planning, Marketing, and Assessment 3 credit(s)
- IST 616 - Information Resources: Organization and Access 3 credit(s)

Management and Policy Core (6 credits)
- IST 614 - Management Principles for Information Professionals 3 credit(s) (Note: school media students take IST 661 instead)
- IST 618 - Information Policy 3 credit(s)

II. Electives (14 credits)
14 credits of electives allow students to extend their core knowledge and skills in directions of their choice. Electives can be selected from graduate courses in the iSchool, including those from the Information Management program. In selecting courses that are not LIS-focused, the student should consult with his/her faculty advisor to ensure their appropriateness. A student should consider how any elective will add to his/her knowledge and skill set as an emerging professional.
- IST 502 - New Directions in Academic Libraries 1-3 credit(s)
- IST 553 - Information Architecture for Internet Services 3 credit(s)
- IST 556 - Mobile Network Services 3 credit(s)
- IST 558 - Technologies in Web Content Management 3 credit(s)
- IST 564 - Library & Information Services to Students with Disabilities 3 credit(s)
- IST 565 - Data Mining 3 credit(s)
- IST 585 - Knowledge Management 3 credit(s)
- IST 604 - Cataloging of Information Resources 3 credit(s)
- IST 611 - Information Technologies in Educational Organizations 3 credit(s)
- IST 612 - Youth Services in Libraries and Information Centers 3 credit(s)
- IST 617 - Motivational Aspects of Information Use 3 credit(s)
- IST 619 - Applied Economics for Information Managers 3 credit(s)
- IST 622 - Introduction to Preservation of
Cultural Heritage 3 credit(s)
- IST 624 - Preservation of Library and Archival Collections 3 credit(s)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 628 - Organization/Management of Archival Collections 3 credit(s)
- IST 631 - Theory of Classification and Subject Representation 3 credit(s)
- IST 632 - Management and Organization of Special Collections 3 credit(s)
- IST 635 - Collection Development and Access 3 credit(s)
- IST 638 - Indexing and Abstracting Systems and Services 3 credit(s)
- IST 639 - Enterprise Technologies 3 credit(s)
- IST 641 - User-Based Design 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 646 - Storytelling for Information Professionals 3 credit(s)
- IST 649 - Human Interaction with Computers 3 credit(s)
- IST 653 - Telecommunications and Enterprise Network Management I 3 credit(s)
- IST 656 - Telecommunications and Enterprise Network Management II 3 credit(s)
- IST 657 - Basics of Information Retrieval Systems 3 credit(s)
- IST 659 - Data Administration Concepts and Database Management 3 credit(s)
- IST 661 - Managing a School Library 3 credit(s)
- IST 662 - Instructional Strategies and Techniques for Information Professionals 3 credit(s)
- IST 664 - Natural Language Processing 3 credit(s)
- IST 667 - Information Technology for Libraries and Information Centers 3 credit(s)
- IST 668 - Literacy Through School Libraries 3 credit(s)
- IST 676 - Foundations of Digital Data 1-3 credit(s)
- IST 677 - Creating, Managing, and Preserving Digital Assets 3 credit(s)
- IST 679 - Electronic Commerce Technologies 3 credit(s)
- IST 685 - Social Networks in Libraries 3 credit(s)
- IST 715 - LAMS: Libraries, Archives, Museums 3 credit(s)
- IST 717 - Advanced Library Management 3 credit(s)
- IST 735 - Copyright for Information Professionals 3 credit(s)
- IST 753 - Telecommunications and Enterprise Network Management III 3 credit(s)

III. Exit Requirement (3 credits)
The exit requirement for the LIS degree is a three-credit internship or independent study.

A. Internship:
The internship treated as another course in terms of the intensity and depth of the knowledge sought. Most students choose this option for their exit requirement even if they have had prior library work experience. An internship comprises 150 hours of work on site (or virtually) for 3 credits. Internships can be done locally in the Syracuse area, nationally, and even internationally. The student must be under the supervision of a professional librarian or information manager, although this does not mean that the student can’t work with non-professionals as part of the experience. Most internships involve some general orientation, some work practice, and often a special project. Each experience is different and the student designs the internship contract in cooperation with the site supervisor, the faculty internship advisor, and his or her academic advisor. An internship may be paid or unpaid.

- IST 971 - Internship in Information Studies 1-6 credit(s)

B. Independent Readings and Research:
Students who already possess significant/professional work experience in libraries or information centers may elect to do a culminating project as an independent study or readings and research in place of an internship. No more than 12 credits of a student’s program can be taken as independent study or internship.

Programs of Study for Specific Types of Libraries or Library Positions:
The generalist core provides a solid grounding in the knowledge and skills of librarianship. Most electives are designed to provide conceptual and practical knowledge and skills that apply across types of libraries. For students wishing to prepare for a specific type of library or position, there are many ways to tailor your program of study to these interests. These include:
- Choosing topics pertaining to your areas of interest for papers and projects in core and elective courses.
- Choosing an iSchool Certificate of Advanced Study to combine with the master’s degree.
- Choosing electives that are particularly appropriate for a particular type of library or position: see the section on advising guides below.
- Developing an internship that gives you practical experience in your area of interest.
- Taking an independent study in your area of interest.

Your advisor can work with you to plan a program of study that will prepare you for positions in your area of interest while also providing you with a solid generalist knowledge that will allow you to take advantage of unexpected opportunities.

Library and Information Science: School Media, MS

Contact:
Jill Hurst-Wahl, Program Director, 208 Hinds Hall, (315) 443-1070, igrad@syr.edu

Website:
Library & Information Science: School Media

Overview:
The School Media program is a major specialization within the Library and Information Science (LIS) program and requires that students meet not only the core LIS requirements, but also specified coursework in information literacy, youth services, information technology in schools, literacy and reading support, and management in school libraries. School librarians provide active curriculum support services and library and information skills instruction in elementary and secondary school settings. School librarians serve as intermediaries between the information needs of students, faculty, administration, and community and the information systems and resources required to fulfill those needs. In this capacity, school librarians provide print and non-print media in support of the curriculum; collaborate with classroom teachers by teaching research/information literacy skills in the context of the general curriculum; guide students in selecting reading materials and provide literacy support; introduce and facilitate effective use and delivery of current and emerging technologies; and implement a range of 21st century skills-based programs and services.

The traditional role of school librarians has expanded to include:
- collection management based on a unified media concept;
- teaching, support, and guidance in the use of information resources from a problem-solving perspective;
- promotion of print, media, and digital literacy;
- curriculum consultation and technology innovation;
- information management beyond the walls of the centralized library facility; and program management.

The current educational focus on lifetime learning, critical thinking skills, and multiple literacies directly links overall educational goals to the
services and resources of the school library program.

The nationally ranked (U.S. News & World Report) School Media Program at Syracuse University prepares students for the exciting and challenging role of the school librarian. The School of Information Studies has developed a competency-based academic program, based on the New York State Teaching Standards and leading to New York State certification as a school library media specialist.

The LIS master's degree in school media also enables graduates to enter other specializations in the library profession. For example, in public libraries there is a critical need for librarians for children and young adult services. In community college libraries, the need for librarians trained in teaching information and technology skills is high. Some school media students are choosing to become digital librarians in government and corporate settings. Students trained as school librarians are highly qualified for these and other library positions.

Learning Outcomes:

By the time students complete the LIS School Media program, they will be able to demonstrate the following knowledge and skills:

Standard 1: Teaching for Learning
Knowledge of learners and learning
Effective and knowledgeable teacher
Instructional partner
Integration of twenty-first century skills and learning standards

Standard 2: Literacy and Reading
Literature
Reading promotion
Respect for diversity
Literacy strategies

Standard 3: Information and Knowledge
Efficient and ethical information-seeking behavior
Access to information
Information technology
Research and knowledge creation

Standard 4: Advocacy and Leadership
Networking with the library community
Professional development
Leadership
Advocacy

Standard 5: Program Management and Administration
Collections
Professional Ethics
Personnel, Funding, and Facilities

Strategic Planning and Assessment

Curriculum:
The School Media program requires 37 credits for the MSLIS and completion of additional New York State certification requirements. Because of the specific knowledge and skills required by school librarians, all courses in the program are required—there are no school media electives. Students are required to take the following courses.

I. Introductory Courses (4 credits)
  - IST 511 - Introduction to the Library and Information Profession 3 credit(s) (gateway course)
  - IST 601 - Information and Information Environments 1 credit(s)

II. Information Resources Courses (9 credits)
  - IST 605 - Reference and Information Literacy Services 3 credit(s)
  - IST 613 - Library Planning, Marketing, and Assessment 3 credit(s)
  - IST 616 - Information Resources: Organization and Access 3 credit(s)

III. Management and Policy Courses (6 credits)
  - IST 618 - Information Policy 3 credit(s)
  - IST 661 - Managing a School Library 3 credit(s)

IV. Other Required Coursework (15 credits)
  - IST 564 - Library & Information Services to Students with Disabilities 3 credit(s)
  - IST 611 - Information Technologies in Educational Organizations 3 credit(s)
  - IST 612 - Youth Services in Libraries and Information Centers 3 credit(s)
  - IST 663 - Motivating 21st Century Learning in School Libraries 3 credit(s)
  - IST 668 - Literacy Through School Libraries 3 credit(s)

V. Fieldwork (100 hours)
School media students must complete a total of 100 (non-credit) hours of fieldwork in elementary and secondary school libraries before their first practicum experience. A minimum of 15 hours must be with students with special needs.

VI. School Media Practicum
Fully supervised and evaluated school-based library experiences at the elementary and secondary levels (120 hours each). Includes mandatory online seminar.
  - IST 972 - School Media Practicum 1-6 credit(s) 3 credit(s)

VII. Additional Requirements
Students must complete the school media competencies checklist at the beginning of the program, after their second fieldwork experience, after their first practicum experience, and after all coursework, fieldwork and practica have been completed. This instrument is used as a means for documenting student growth and as a guide for fieldwork and practicum placement.

Additional Information
Upon completion of the School Media Program, combined with New York State requirements including (1) completion of the New York State child abuse, substance abuse, and violence prevention workshops; (2) the Child Health and Life Safety Prevention workshop (fire and arson prevention; highway safety and traffic regulations and school safety patrols; child abduction prevention; and prevention of alcohol, tobacco, and drug abuse); (3) fingerprinting; (4) Dignity for All Students Act (DASA) workshop; and (5) successful completion of the appropriate New York State certification exams, students will have fulfilled all the necessary requirements for certification as a school library media specialist in an elementary or secondary school in New York State. The School of Education, with approval from the School of Information Studies, will recommend a student for a New York State School Media Specialist initial certificate, preK-12, necessary for employment for New York State public schools and accepted for employment by most other states.

*Graduation requirements

Telecommunications and Network Management, MS
Carsten Oesterlund, Program Director, 309 Hinds Hall, 315-443-2911, igrad@syr.edu

Website:
Telecommunications & Network Management

Overview:
*The Telecommunications and Network Management program is not currently accepting new applicants

Networks are the information infrastructure of an enterprise. The networked global economy has revolutionized markets and reshaped public institutions. The strategic importance of data, voice, and video communications fuels a growing demand for professionals who combine knowledge of the network infrastructure with an understanding of applications and industry...
Learning Outcomes:

By the time students complete the TNM program, they will be able to demonstrate:

Leadership in technology management

- Strategic awareness of the industrial, legal and political environment
- Technical knowledge and experience

Leadership in Technology Management means that students will be able to:

- Integrate knowledge of communication technologies with appropriate policy, financial and management issues
- Apply critical thinking skills and creativity to managerial problems

- Generate solutions to human and/or technological problems using relevant technologies, theories, and concepts; to model, analyze and critique them; and to make recommendations

- Communicate clearly, effectively and professionally in writing and in public presentations, and to engage in effective collaboration, leadership, and teamwork

Strategic Awareness of the Industrial, Legal and Political Environment means that students will be able to:

- Articulate the basic issues of telecommunication and information policy, and the key governmental and regulatory processes affecting them, from a global perspective

- Describe the political, economic and social forces shaping information and communication technologies

- Analyze industry trends and evaluate their implications for stakeholders

Technical Knowledge and Experience means that students will be able to:

- Demonstrate broad knowledge of the fundamental principles and technical standards underlying telecommunication, networking, and information technologies.

- Architect and implement networked information systems

- Continuously improve their technology knowledge and communication skills

- Anticipate the way technological change and emerging technologies might alter the assumptions underlying architectures and systems

Curriculum:

The curriculum requires completion of 36 credits. The program must be completed within seven years. Most students finish the degree in two years. The program is available to part-time students and can be completed at the student's own pace through evening and online courses.

The 36-credit curriculum includes 19 credits of primary core requirements, 14 credits of electives, and a 3-credit exit requirement.

I. Primary Core: (19 credits)

This set of courses orient students to the information profession, management, policy, and the field of telecommunications.

- IST 601 and IST 653 are taken the first semester.

  - IST 601 - Information and Information Environments 1 credit(s)
  - IST 614 - Management Principles for Information Professionals 3 credit(s)
  - IST 618 - Information Policy 3 credit(s)
  - IST 623 - Introduction to Information Security 3 credit(s)
  - IST 653 - Telecommunications and Enterprise Network Management I 3 credit(s)
  - IST 656 - Telecommunications and Enterprise Network Management II 3 credit(s)
  - IST 753 - Telecommunications and Enterprise Network Management III 3 credit(s)

II. Electives: (14 credits)

Courses, other than those listed below, may apply as electives. Students should consult the program director for these requests.

- IST 522 - Applied Information Security 3 credit(s)
- IST 553 - Information Architecture for Internet Services 3 credit(s)
- IST 556 - Mobile Network Services 3 credit(s)
- IST 600 - Selected Topics 1-6 credit(s) Mobile Application Design & Development
- IST 600 - Selected Topics 1-3 credit(s) Scripting Foundations
- IST 619 - Applied Economics for Information Managers 3 credit(s)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 627 - What's the Big Idea: Technology Innovation 3 credit(s)
- IST 634 - Security in Networked Environments 3 credit(s)
- IST 639 - Enterprise Technologies 3 credit(s)
- IST 641 - User-Based Design 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 648 - Enterprise Wireless Network Technologies 3 credit(s)
- IST 654 - Information Systems Analysis 3 credit(s)
- IST 659 - Data Administration Concepts and Database Management 3 credit(s)
- IST 679 - Electronic Commerce Technologies 3 credit(s)
- IST 683 - Managing Information Technology-Enabled Change 3 credit(s)
- IST 686 - Social Media in the Enterprise 3
School of Information Studies

Distinctive Features:

• Interactive Delivery Format: Combines periodic brief residential periods with distance learning experiences; students remain working full time within their home organizations.
• Centered on Apprenticeship: Students immediately enter collaboration with the iSchool through shared projects with their faculty guidance committees and the iSchool leadership.
• Research in Action: Students sharpen their analytical, research, and critical thinking skills through a variety of instructional interactions with faculty.
• Outcome Oriented: The program focuses on showcasing these skills through professional writing of academic analyses.
• Tailored Curriculum: We undertake broad-based development of the doctoral candidate through immersion in the activities and projects of faculty members and the school.
• Personalized Mentoring and Professional Development: Doctoral students enter with an appreciation of the role of information in the knowledge economy and leave with the tools, skills, and network to influence that economy.
• Problem-Solving Orientation: Gaining the necessary expertise and outlook prepares the student to address the issues and challenges faced by information-based organizations across the sectors of society.
• In Situ Inquiry: Explores the operations, environment, and people in a living organization.
• Publication Quality Thesis: May lead to enhanced visibility and recognition in the field through the production of a book, white papers, and other publications.

Information Management, DPS

Overview:
The Doctorate of Professional Studies in Information Management (DPS-IM) is a 51-credit, part-time program for working professionals interested in leadership and applied research in the information field. This 36-42 month program prepares innovators to be the catalyst for positive change within their organizations.

The Doctorate of Professional Studies (DPS) in Information Management program is designed for elite information professionals whose career trajectory is directed to taking on visible leadership in professional practice. This highly selective, non-traditional doctoral program accepts students who can establish powerful working partnerships between the iSchool and their own organizations.

Curriculum:
The Doctorate of Professional Studies in Information Management curriculum involves coursework, comprehensive examinations, and thesis research completed over 36-42 months starting at the beginning of a summer semester. The 51-credit Program of study involves:
• Intensive residential seminars each semester
• Gateway/orientation learning experience
• Methods courses and workshops
• Practical courses selected from our graduate curricula in Library Science, Information Management, or Telecommunications and Network Management
• Advanced courses, possibly leading to the completion of a Certificate of Advanced Study in addition to the doctoral degree
• Thesis hours - close faculty mentoring over thesis development

The degree program begins with an intensive residential Intensive Seminar and Methods Workshop at the beginning of the summer semester (usually in May) for the year in which a student is admitted. During the first residential seminar, students will become more familiar with the program's coursework, faculty, technology, and each other.

Additional Information
Note the final year of the program may extend to 18 months, as it is recognized professional or personal circumstances may require some flexibility in completing degree requirements.

Information Science and Technology, PhD

Overview:
The Ph.D. in Information Science and Technology at Syracuse University's School of Information Studies is a research degree, one that prepares its graduates to address information-related phenomena in a broad range of diverse settings and across a wide range of analytic frames spanning technological, individual, organizational, societal, political perspectives.

The Information Science and Technology Ph.D. program is interdisciplinary, bringing together relevant knowledge and methods from information science, the behavioral and social sciences, organization studies, economics, computer science, linguistics, communications, law and public policy. Graduates of the Ph.D. in Information Science and Technology are world-renown for their excellence in the advancement and dissemination of new knowledge, both basic and applied, regarding the designs, uses and evaluation of information systems, services, and policies for individuals, for groups, for private-sector firms, and for nonprofit and governmental organizations.

The Ph.D. students in our program represent a wide range of education, training, experience and expertise that includes:
• Information and Society: information and public policy, societal change and information and communication technologies (ICT), e-government, digital inequities, media convergence, community networks, libraries and access
• Information and Organizations: new forms of digitally-enabled organizing, ICT governance e-commerce, technology-driven innovation/change, ICT-enabled organizations
• Information and Individuals: human-computer interaction, information-seeking behavior, medical informatics
• Information Systems: design, survivability, security
Learning Outcomes:
Successful Ph.D. graduates will have the following set of skills and knowledge in:

- **Comprehensive Mastery of a body of knowledge**: Demonstrate mastery of the body of knowledge and research methods of a defined scholarly field and its relation to the interdisciplinary study of information science and technology. Given the interdisciplinary nature of the PhD in Information Science and Technology, comprehensive mastery includes both an assessment of the depth of knowledge in the focal area of one’s dissertation along with an assessment of a broader range of overlapping intellectual spaces. This combination of breadth and depth is the distinguishing characteristic of interdisciplinary PhD programs and reflects a set of analytic skills and command of a breadth of knowledge beyond what disciplinary PhD programs provide (or expect).

- **Expertise with Research Design, Data Collection and Data Analysis methods**: Demonstrate the ability to independently plan, design, execute, and report a scholarly research project.

- **Competence with leading a college course and designing engaging learning experiences**: Demonstrate the ability to plan and deliver instructional experiences at the post-secondary level.

- **Prepared for Professional Practices**: Demonstrate knowledge of the professional norms, practices, and ethical standards of a defined scholarly field.

- **Pursue Academic Life**: Demonstrate the ability to participate as an active contributor in the academic life as a faculty member or researcher.

Curriculum:
The program requires 78 credits post-baccalaureate. Up to 30 of these credits can be transferred in for PhD students with a relevant MS degree. Thus, most PhD students need to complete 48 credits while at Syracuse.

Typically, 18 of their credits are devoted to the PhD thesis - the culminating and critical component of the Ph.D. in Information Science and Technology.

- IST 999 - Dissertation 1-15 credit(s)

The Remaining 30 credits
The remaining 30 credits are taken through a combination of research methods courses, research seminars, and topical courses so as to maximize the PhD student's ability to achieve mastery, advance their research skills, and develop as a college teacher.

- IST 801 - Doctoral Gateway Seminar
- IST 776 - Research Methods in Information Science and Technology 3 credit(s)
- IST 777 - Statistical Methods in Information Science and Technology 3 credit(s)
- IST 790 - Advanced Topics in Information Organization 1-3 credit(s)
- IST 820 - Seminar in Research Methods 3 credit(s)

12 Credits of Research and Teaching Practica
As such, the program is very flexible and can be constructed to meet individual student's unique need. The only formal requirement is that PhD students must complete 12 credits of research and teaching practica (which typically takes four semesters). These practica are apprentice-like experiences working one-on-one with faculty - these serve as the foundation of the PhD in Information Science and Technology and are the common experience shared by all students in the program.

- IST 810 - Practicum in Research 2 credit(s)
- IST 840 - Practicum in Teaching 1-2 credit(s)

Additional Information
Given the nature of the PhD, the total number of credits accumulated (at Syracuse or elsewhere) is not a major consideration in a student's progress through the program. Instead, what matters is a student's mastery of the skills needed to become an independent, productive researcher. While coursework completed elsewhere may decrease the number of credits that must be earned at Syracuse, it may not necessarily decrease the length of a student's program.

To move from taking courses to pursuing dissertation research, PhD students must showcase their comprehensive mastery of their field of study and research skills in a process we call "end of coursework" or "EOC." The EOC requires both a written case to be made as to why the PhD student is prepared to move forward, followed by an oral defense of their case (typically in the third year of study). Students who successfully complete EOC are admitted to PhD candidacy. After that, a dissertation proposal and then a dissertation must be presented and defended. Students are expected to defend their dissertation in their fifth year of study.

Library and Information Science, JD/MS

Degree Requirements
The Juris Doctor/Master of Science in Library and Information Science is a combined degree which may be conferred by the School of Information Studies and the College of Law. Students admitted to this program have the opportunity to obtain both the Juris Doctor and the M.S. in Library and Information Science in substantially less time than would be required were the two degrees obtained independently. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.
Students will complete three of the following elective courses. At least two of the three courses must be from outside of the student's primary program of study:

- **ANT 644 - Laboratory Analysis in Archaeology** 3 credit(s)
- **ANT 682 - Life Histories/Narratives** 3 credit(s)
- **ANT 645 - Public Policy and Archaeology** 3 credit(s)
- **ANT 461 - Museums and Native Americas** 3 credit(s)
- **IST 616 - Information Resources: Organization and Access** 3 credit(s)
- **IST 624 - Preservation of Library and Archival Collections** 3 credit(s)
- **IST 628 - Organization/Management of Archival Collections** 3 credit(s)
- **IST 632 - Management and Organization of Special Collections** 3 credit(s)
- **IST 677 - Creating, Managing, and Preserving Digital Assets** 3 credit(s)
- **IST 715 - LAMS: Libraries, Archives, Museums** 3 credit(s)
- **MUS 500 - Selected Topics** 1-6 credit(s)
- **MUS 506 - Introduction to Curatorship** 3 credit(s)
- **MUS 607 - Collections Management** 3 credit(s)
- **MUS 703 - Advanced Curatorship** 3 credit(s)

**Other Courses for Elective Credit(s)**

With consent of program advisors, a student may petition to substitute other courses for elective credit towards the CAS.

### III. Internship (3-6 credits)

Two 150-hour internships are also required. Students will work at an institution, agency, or community organization for two 150-hour internships.

These may be at the same organization or at two different organizations, but should be completed in different semesters. Students will report to both an on-site supervisor and a faculty internship advisor during the process, and the on-site supervisor will evaluate the student's activities at the end of each semester.

The faculty internship advisor can be a faculty member from Information Studies, Museum Studies, or Anthropology. The internships may be taken either as ANT 670, MUS 670, or IST 971, or upon approval of the appropriate program advisor. By petition, the student may receive 150 hours of credit upon completion.

### IV. Summation

In their final semester students will:

Bring together documentation (e.g., papers, internship projects, presentations) into a portfolio that will adequately present their accomplishments and contributions during their course of study and internship experiences and;

Write a paper reflecting on their education and preparation for a professional position.

This summation is a requirement for the completion of the CAS degree.
E-Government Management and Leadership, CAS

Contact:
Margaret Lane, Asst. Director of Executive Education, 315-443-8708
http://ischool.syr.edu/future/cas/egov.aspx

Certificate Requirement
The E-Government Management and Leadership Certificate of Advance Study is a 12-credit graduate-level certificate designed for students currently pursuing another graduate degree or as post-baccalaureate work. The CAS is organized by two broad thematic areas:

leadership and management of information and communication technology applications found in public organization E-government systems, and
technical design aspects of E-government in public organizations. There are two required courses for this degree:

- IST 711 - e-Government 3 credit(s)
- PAI 895 - Mid-career Training Group 1-3 credit(s)

Information Security Management, CAS

Contact:
Carsten Oesterlund, Program Director, 309 Hinds Hall, 315-443-2911, igrad@syr.edu

Website:
Information Security Management

Overview:
Information is a critical asset within an organization. Lives and livelihoods depend on the continued operation of information systems and their correct operation. With the increasing complexity of today’s hardware, software, and their networking, the need for managing enterprise security becomes more pressing. Information Security Management (ISM) can be defined as the comprehensive technical security, increased operational costs, and diverse policies and user behavior. Senior executives, IT managers, and technical staffs need well-educated, strong skills in ISM for their organizations.

The Certificate of Advanced Study in Information Security Management offers a comprehensive set of skills for information security management, enabling students to take a lead role in the area within their organizations. The 15-credit program provides students with the flexibility to take coursework that does not overlap with their current expertise but gives them tools in information security technology, policy, risk management, and evaluation, depending on their background.

This certificate is offered in both campus and distance learning formats, and can be completed as a full-time or part-time student. The certificate is available to those with or without experience in the information technology field. Applicants may be currently working in a related field, or they may be interested in making a career change into the information security field. The certificate also provides an opportunity for professional development and serves as a foundation for career advancement.

Curriculum:
The certificate requires 15 graduate credits. All courses are 3 graduate credits unless specified otherwise.

I. Required Core (3 credits)
- IST 623 - Introduction to Information Security 3 credit(s)

Note:
* Security courses, other than those listed below, may apply. Students should review other security courses on the course schedule for possible substitution, as appropriate. Students should consult the program director for these requests.

II. Management Security (at least 3 credits)
- IST 600 - Selected Topics 1-6 credit(s)
- IST 600 - Selected Topics 1-3 credit(s)

Website: Information Management for Critical Infrastructure Protection

III. Technology Security (at least 3 credits)
- IST 625 - Enterprise Risk Management 3 credit(s)
- IST 725 - Information Technology Security Architecture 3 credit(s)

Website: Information Security Policy 3 credit(s)

IV. Information Studies (6 credits)
An additional 6 credit hours from the Management Security or Technology Security course lists above or from any of the below courses:

- IST 618 - Information Policy 3 credit(s)
- IST 639 - Enterprise Technologies 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 656 - Telecommunications and Enterprise Network Management II 3 credit(s)
- IST 659 - Data Administration Concepts and Database Management 3 credit(s)
- IST 679 - Electronic Commerce Technologies 3 credit(s)
- IST 690 - Independent Study 1-6 credit(s)
- IST 971 - Internship in Information Studies 1-6 credit(s)

Scholarship Opportunity:
Students who are citizens of the United States are eligible to apply for a grant through the Department of Defense Information Assurance Scholarship Program (IASP).

Earn a Master’s Degree:
Participants in the certificate program have the option of applying these graduate credits toward
a master's degree offered at the School of Information Studies. All 15 credits completed for the certificate can be included in the 42-credit requirement Master of Science in Information Management. Selective credits may be applied to the 36-credit Master of Science in Library and Information Science.

### Information Systems and Telecommunications Management, CAS

#### Contact:
Carsten Oesterlund, Program Director, 309 Hinds Hall, 315-443-2911, igrad@syr.edu

#### Website:
Information Systems and Telecommunication

#### Overview:
Managing the information systems and telecommunications functions has become critical to all organizations. The 15-credit graduate certificate program in Information Systems and Telecommunications Management (IS&T&M) enables you to advance your present career or discover new options in the dynamic, challenging field of information systems management and telecommunications. With this program, you can expand your career options and gain a competitive advantage in pursuing career opportunities in business, government, or not-for-profit organizations.

The certificate stands alone; however, after successful completion, you have the option of continuing to earn a master's degree in information management or in telecommunications and network management.

The graduate certificate in IS&T&M equips you with an understanding of key issues in the fields of information and telecommunications management, including:

- Management and implementation of rapidly changing information technologies
- Database management and administration
- Management of local and wide-area networks and the challenge of global interconnectivity
- Harnessing information resources to improve organizational effectiveness, including decision making, problem solving, strategic planning, marketing, and budgeting processes
- Project management processes and challenges of outsourcing
- Systems integration
- Website design and management, including information architecture
- State-of-the-art applications in computer, telecommunications, and information technologies

### Curriculum:
The certificate requires 15 graduate credits. All courses are 3 graduate credits unless specified otherwise.

#### I. Certificate Core (3 - 4 credits)
All Students must take IST 601 and either IST 621 or IST 653
- IST 601 - Information and Information Environments 1 credit(s)
- IST 621 - Introduction to Information Management 3 credit(s)
- IST 653 - Telecommunications and Enterprise Network Management I 3 credit(s)

Note:
Students wanting a general preparation in both information systems management and telecommunications management may wish to take both introductory courses, substituting one for an elective below.

#### II. Certificate Electives (11 - 12 credits)
- IST 553 - Information Architecture for Internet Services 3 credit(s)
- IST 645 - Managing Information Systems Projects 3 credit(s)
- IST 654 - Information Systems Analysis 3 credit(s)
- IST 656 - Telecommunications and Enterprise Network Management II 3 credit(s)
- IST 659 - Data Administration Concepts and Database Management 3 credit(s)
- IST 683 - Managing Information Technology-Enabled Change 3 credit(s)

Additional Information
Other graduate courses offered during the spring and fall, or in the summer, may be used as electives with the approval of the Program Director.

### Earn a Master's Degree:
Participants in the certificate program have the option of applying these graduate credits toward a master's degree offered at the School of Information Studies. All 15 credits completed for the certificate can be included in the 42-credit requirement Master of Science in Information Management. Selective credits may be applied to the 36-credit Master of Science in Library and Information Science.

### School Media, CAS

#### Contact:
Jill Hurst-Wahl, Program Director, 208 Hinds Hall, (315) 443-1070, igrad@syr.edu

#### Website:
CAS in School Media

#### Overview:
Students who already possess a master's degree in library and information science from Syracuse University, or another accredited institution, can be certified as school library media specialists after being accepted into the program and then by completing the following coursework. Students must first undergo a thorough review of their graduate library science degree transcript to determine if the core graduate course requirements and the undergraduate course requirements have been fulfilled. If all requirements have not been met, additional courses will be required. The program is presented in both campus-based and distance learning course formats.

#### Curriculum:
The graduate certificate in school media requires the completion of 21 total credits.

#### I. Core Courses (18 credits)
The following required courses provide a foundation in literature, media services instructional design, assessment and evaluation, teaching methods, reading support services, collaboration, information technologies in education, information literacy, and motivation.
- IST 564 - Library & Information Services to Students with Disabilities 3 credit(s)
- IST 611 - Information Technologies in Educational Organizations 3 credit(s)
- IST 612 - Youth Services in Libraries and Information Centers 3 credit(s)
- IST 661 - Managing a School Library 3 credit(s)
- IST 663 - Motivating 21st Century Learning in School Libraries 3 credit(s)
- IST 668 - Literacy Through School Libraries 3 credit(s)

#### II. Fieldwork (100 hours, 50 hours on each level)
Fieldwork in both elementary and secondary levels must be completed before the first practicum experience. A minimum of 15 hours must be with students with special needs.

#### III. Practicum (3 credits)
Students must complete a 3-credit, on-site, school-based supervised practica-one at the elementary level and one at the secondary level (120 hours each).
• IST 972 - School Media Practicum 1-6 credit(s)

IV. Additional Requirements

Students must complete the school media program competencies checklist at the beginning of the program and at other designated times during the program. This instrument is used as a means for documenting a student's progress and growth and as a guide for fieldwork and practicum placement.

Near or at the end of their program, school media students are required to complete New York State requirements including the series of New York State workshops on child abuse, substance abuse, and violence prevention and Child Health and Life Safety Prevention (including fire and arson prevention; highway safety and traffic regulations and school safety patrols; child abduction prevention; and prevention of alcohol, tobacco, and drug abuse)*, Dignity for All Students (DASA) workshop*, fingerprinting and successful completion of the appropriate New York State certification exams. Once all of the requirements have been completed, students will have met all requirements for certification as a school library media specialist at the elementary and secondary levels. Syracuse University’s School of Education, with approval from the School of Information Studies, will provide institutional recommendation for a New York State School Media Specialist initial certificate, preK-12, necessary for employment in New York State public schools and accepted for employment by most other states.

*graduation requirement
School of Information Studies Faculty

Marilyn R Amone, 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. 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, computer-supported 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), cross-language retrieval, data mining, text mining, automatic metadata generation, health informatics

Ian Machnes, 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, nomadity, 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, web-based management tools (including log analysis), user behavior on the Internet
Steven B. Sawyer, Associate Dean for Research; Director, Ph.D. 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
**School of Information Studies**

**Courses**

**Global Enterprise Technology**

**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

**GET 600 - 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 602 - Global Financial Systems Architecture**
School of Information Studies
3 credit(s) At least 1x fall or spring
Structures of real-world information systems in the money supply chain. Emphasis on large-scale banking organizations and their challenges in moving and processing millions of complex transactions worldwide for all types of customers.

**GET 634 - Effective Communication within a Global Enterprise**
School of Information Studies
1.5 credit(s) Upon sufficient interest
Principles and practices of presentations in a global enterprise, from formal presentations to conducting meetings. Integrates theoretical foundations and practical guidance with real world experiences in communicating effectively in the workplace.

**GET 646 - Advanced Enterprise Systems Development Lifecycle**
School of Information Studies
1.5 credit(s) Upon sufficient interest
Challenges of large-scale project management with focus on information systems development. Exploration of issues with the typical systems development life cycle (SDLC) that are most impacted by the complexities of building information systems, and for, large enterprises.

**GET 662 - Enterprise Systems Strategies and Architectures**
School of Information Studies
3 credit(s) At least 1x fall or spring
This course builds the basic understanding of the technical and management architecture that comprise enterprise computing environments. The course focuses on identifying and solving large complex problems by using enterprise computing technologies.

**GET 665 - IT Strategy and Business Value**
School of Information Studies
1.5 credit(s) Upon sufficient interest
Strategic and financial measures of global IT value including TCO, ROI, and NPV; strategic fit; IT investment risk; IT governance and IT models; measuring IT performance; IT change management.

**GET 675 - Business of IT**
School of Information Studies
1.5 credit(s) Upon sufficient interest
Global and geographically dispersed budget and control of 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 683 - Systems Modeling and Simulation**
School of Information Studies
3 credit(s) Upon sufficient interest
To prepare students with fundamental knowledge in simulation and modeling so that they can communicate with decision and policy makers as well as technical IT professionals in large global organizations, in particular in the information systems department of the organizations.

**GET 684 - Large-scale IT Projects**
School of Information Studies
1.5 credit(s) Upon sufficient interest
A project-based course that exposes students to the challenges of IT enabled innovation and organizational change in the context of a complex, large-scale enterprise. Capstone course for the CAS in Global Enterprise Technology.

**GET 686 - Independent Technology Education**
School of Information Studies
3 credit(s) Every semester
Double Numbered with: GET 486
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 687 - Global Tech**
School of Information Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: GET 487
2 week traveling seminar to different countries in Europe, visiting global organizations exploring key enterprise technology topics from a global perspective. Additional work required of graduate students.

**Information Technology, Design and Startup**

**IDS 600 - 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

**IDS 690 - Independent Study**
School of Information Studies
1-6 credit(s)
Repeatable

**Information Studies**

**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 1x 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 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 1x 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 1x 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.

**IST 600 - 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 601 - Information and Information Environments**  
*School of Information Studies*  
1 credit(s) At least 1x fall or spring  
A broad overview of the field and an orientation to the School of Information Studies. Describes the past, present, and future of information studies.

**IST 602 - Digital Forensics**  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Examination of information technology to establish probative information. Fundamentals of the forensic process, evidence handling and quality assurance as these apply to digital forensics.

**IST 604 - Cataloging of Information Resources**  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Cataloging rules, standards, and metadata schemes; bibliographic utilities; formats of print and non-print materials; cataloging software; management issues.

**IST 605 - Reference and Information Literacy Services**  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
The discovery and use of print and electronic resources and delivery of services in libraries to meet information needs of varied patron communities in a broad range of contexts.

**IST 606 - Legal Information Resources and Services**  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Legal research methods/materials and management of legal information resources. Includes federal, state, private, and international legal resources.

**IST 609 - Biomedical Information Services and Sources**  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  

**IST 611 - Information Technologies in Educational Organizations**  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Information and communications technologies, ethical issues, knowledge management tools, collaborative learning technologies, education databases, etc. On-site project field work constitutes a major portion of course requirements.

**IST 612 - Youth Services in Libraries and Information Centers**  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Theories, practices, media, literature and emerging trends of youth services from preschool to high school are explored. A broad range of competencies necessary to work with youth in a variety of library settings are presented.

**IST 613 - Library Planning, Marketing, and Assessment**  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
User-focused planning, marketing, and assessment of activities that support core functions of libraries, such as collection development, systems, and public services.

**IST 614 - Management Principles for Information Professionals**  
*School of Information Studies*  

IST 616 - Information Resources: Organization and Access
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduction to theories, tools, and standards for information organization and access, including cataloging rules and formats, content analysis, indexing, classification, and fundamentals of information retrieval systems.

IST 617 - Motivational Aspects of Information Use
School of Information Studies
3 credit(s) At least 1x fall or spring
Theories of motivation and behavior affecting information use in learning, workplace, and virtual environments. Emphasis on applying motivational theories and models to management practices in information organizations and to the design of information resources and presentations.

IST 618 - Information Policy
School of Information Studies
3 credit(s) Every semester
Public policy issues that affect the information, library, and telecommunication sectors. These include privacy and security, intellectual property, freedom of expression, communications access, and public sector information. Application of economic, legal, and political science concepts to policy analysis.

IST 619 - Applied Economics for Information Managers
School of Information Studies
3 credit(s) At least 1x 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.
PREREQ: IST 614

IST 620 - Advanced Topics in Information Innovation
School of Information Studies
3 credit(s) At least 1x fall or spring
Critical and emerging issues in information innovation. The course presents durable concepts of innovation around a specific innovation in the information field. The innovation is used as context for readings and project.

IST 621 - Introduction to Information Management
School of Information Studies
3 credit(s) At least 1x fall or spring
Overview of general management concepts, IM implementation concerns and strategies, information life cycle management, and preparation for an IM career.

IST 622 - Introduction to Preservation of Cultural Heritage
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduction to field of preservation of cultural heritage, including institutions, contexts and methodologies, concepts of place and culture, objects and resources for study; emphasis also on role of digital applications. Requires research project and presentation.

IST 623 - Introduction to Information Security
School of Information Studies
3 credit(s) Every semester
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.

IST 624 - Preservation of Library and Archival Collections
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduction to preserving library and archival collections, including paper, audio-visual, and digital objects.

IST 625 - Enterprise Risk Management
School of Information Studies
3 credit(s) At least 1x 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 626 - What's the Big Idea: Technology Innovation
School of Information Studies
3 credit(s) At least 1x fall or spring
Innovation in information technology. Learn how to develop, grow and vet ideas and build teams ready to create a product, service or business. Additional work required of graduate students.

IST 627 - Organization/Management of Archival Collections
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduction to archival collections including theories and practices associated with archival work, the contexts of archival materials, the digital world, and the archival profession. Requires a collections project.

IST 629 - 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.

IST 631 - Theory of Classification and Subject Representation
School of Information Studies
3 credit(s) Irregularly
Classification is a fundamental human activity as is forming an abstract representation of verbal information. Theoretical basis of classification and subject representation, attempts to automate these activities.

IST 632 - Management and Organization of Special Collections
School of Information Studies
3 credit(s) Irregularly
Principles, methods, and techniques of management, development and organization of special collections such as rare books, archives, or pictorial materials, including issues such as bibliographic services and preservation.

IST 633 - Enterprise Systems
School of Information Studies
3 credit(s) Upon sufficient interest
Crosslisted with: MFE 633
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 634 - Security in Networked Environments
School of Information Studies
3 credit(s) Upon sufficient interest
Practical and theoretical knowledge of network security. Topics covered include security policies and their place in information technology (IT) and business plans, virtual private networks (VPNs), firewalls, public key infrastructures (PKI), and intrusion detection.
IST 635 - Collection Development and Access  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Advanced investigation of collection building, acquisition, and maintenance in libraries and information centers; user and collection analysis, collection development policies, digital resource acquisition and licensing, consortium collaboration, and ethical issues.

IST 637 - Digital Information Retrieval Services  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Overview of multiple types of digital searching tools such as commercial bibliographic databases, web search tools, and specialty search tools. Focus on selection, understanding, and use of search tools, funding, and evaluation of tools and results.  
PREREQ: IST 605

IST 638 - Indexing and Abstracting Systems and Services  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Skills of abstracting and indexing, with analysis of existing secondary services and varieties of index forms. Both manual and computer-based models.

IST 639 - Enterprise Technologies  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Coverage of management and technical architecture issues that comprise enterprise computing environments. In depth focus on identifying and solving large complex problems and using large computing systems to deploy enterprise scale solutions. Hands-on development on enterprise systems.

IST 641 - User-Based Design  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
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 645 - Managing Information Systems Projects  
*School of Information Studies*  
3 credit(s) Every semester  
Double Numbered with: IST 445  
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 646 - Storytelling for Information Professionals  
*School of Information Studies*  
3 credit(s) Irregularly  
Storytelling from oral tradition to information age. Special application in education, library advocacy, business/enterprise, and community engagement. Experiences in various techniques including use of digital tools for story creation.

IST 648 - Enterprise Wireless Network Technologies  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: IST 448  
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 653

IST 649 - Human Interaction with Computers  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Human performance characteristics, user/system communication design alternatives, user behavior research methods, information system organizational impact.

IST 653 - Telecommunications and Enterprise Network Management I  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
A survey of telecommunications and network management issues that focuses on technological foundations, applications, and managerial issues in corporate telecommunications systems and networks.

IST 654 - Information Systems Analysis  
*School of Information Studies*  
3 credit(s) Every semester  
Concepts and methods of systems analysis through decomposition and modeling. Extensive practice with structured methodologies. Systems analysis and project management techniques. Introduction to automated tools and technologies. Group project to apply skills.

IST 656 - Telecommunications and Enterprise Network Management II  
*School of Information Studies*  
3 credit(s) Every semester  
Hardware and software technologies in telecommunication and information networks. TCP/IP protocols. Design, maintenance and management.  
PREREQ: IST 653

IST 657 - Basics of Information Retrieval Systems  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Design, development, and evaluation of information retrieval systems/search engines. Theoretical and applied perspectives on representing, storing, and accessing electronic information. Individual and team projects provide hands-on experience.

IST 659 - Data Administration Concepts and Database Management  
*School of Information Studies*  
3 credit(s) Every semester  
Definition, development, and management of databases for information systems. Data analysis techniques, data modeling, and schema design. Query languages and search specifications. Overview of file organization for databases. Data administration concepts and skills. Credit cannot be given for both IST 659 and IST 658.

IST 661 - Managing a School Library  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Management of school library facilities, services, programs, and people including information flow, curriculum analysis, budgeting, collection organization and management, advocacy, professional development, external resources and services, strategic planning, and staffing.

IST 662 - Instructional Strategies and Techniques for Information Professionals  
*School of Information Studies*  
3 credit(s) Upon sufficient interest  
Introduction to information literacy models for application to instruction in information organizations. Focus on strategies and techniques for designing, presenting, and evaluating information technology training and training materials for real clients.

IST 663 - Motivating 21st Century Learning in School Libraries  
*School of Information Studies*  
3 credit(s) At least 1x fall or spring  
Methods for designing, delivering, and evaluating information and digital literacy skills instruction in schools. Exploration of appropriate interventions that support student motivation for learning 21st century skills and ways of fostering librarian-teacher collaboration.
IST 664 - Natural Language Processing
School of Information Studies
3 credit(s) Every semester
Overview of e-commerce technologies and applications such as EDI, XML, JAVA, middleware, firewalls, encryption, payment systems, database integration, shopping-cart applications, cookies, transaction analysis, and application service providers. Programming experience recommended.

IST 668 - Social Web Technologies
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduces metadata modeling, data binding, vocabulary, interoperability, administration, tools, quality control, and evaluation. Examines international metadata standards, activities, and projects through case studies. Students will have hands-on experience with metadata management systems such as D-Space.
PREREQ: IST 616 OR IST 659

IST 681 - Metadata
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduces fundamentals about data and the standards, technologies, and methods for organizing, managing, curating, preserving, and using data. Discusses broader issues relating to data management and use as well as quality control and publication of data.
COREQ: IST 659

IST 688 - Social Web Technologies
School of Information Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: IST 488
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.

IST 690 - Independent Study
School of Information Studies
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

IST 700 - Selected Topic
School of Information Studies
0-6 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 688 - Social Web Technologies
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduces metadata modeling, data binding, vocabulary, interoperability, administration, tools, quality control, and evaluation. Examines international metadata standards, activities, and projects through case studies. Students will have hands-on experience with metadata management systems such as D-Space.
PREREQ: IST 616 OR IST 659

IST 683 - Managing Information Technology-Enabled Change
School of Information Studies
3 credit(s) At least 1x fall or spring
Fundamentals of information technology-enabled change management. Comparison with more traditional approaches that facilitate change. Estimating the magnitude of change efforts and identification of key stakeholders. Diagnosis through scoping and process models.

IST 684 - idea2Startup
School of Information Studies
3 credit(s) At least 1x 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. Additional work required of graduate students.

IST 685 - Social Networks in Libraries
School of Information Studies
3 credit(s) At least 1x fall or spring
Understanding the use of social networking in librarianship including for patron use, marketing, and in the creation of new services to meet community needs.

IST 686 - 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 687 - Applied Data Science
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduces fundamentals about data and the
operation; library information policies; library financing; legislation affecting libraries.
PREREQ: IST 614

IST 718 - Advanced Information Analytics
School of Information Studies
3 credit(s) At least 1x fall or spring
A broad introduction to analytical processing tools and techniques for information professionals. Students will develop a portfolio of resources, demonstrations, recipes, and examples of various analytical techniques.

IST 719 - Information Visualization
School of Information Studies
3 credit(s) At least 1x fall or spring
A broad introduction to data visualization for information professionals. Students will develop a portfolio of resources, demonstrations, recipes, and examples of various data visualization techniques.

IST 722 - Data Warehouse
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduction to concepts of business intelligence (BI) and the practice/techniques in building a BI solution. Focuses on how to use data warehouses as a BI solution to make better organizational decisions.
PREREQ: IST 659

IST 724 - Database Security
School of Information Studies
3 credit(s) At least 1x fall or spring
Assessment and analysis of database best practices that include: data security policy, access control, intrusion detection, data obscurity, fraud detection, encryption, virtual private databases and physical security.
PREREQ: IST 659

IST 725 - Information Technology Security Architecture
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduces concepts and practices, using an organization-wide enterprise architecture as context. The purpose of an IT security architecture is to ensure proper levels of information confidentiality, integrity, and availability are provided for an organization's information and data.

IST 726 - Enterprise Architecture: Concepts and Practice
School of Information Studies
3 credit(s) At least 1x fall or spring
Documentation and management of information technology resources from a strategy and business driven perspective. Selection and use of frameworks, implementation methodologies, tools, and on-line repositories. Integrated views developed of processes, data, systems, services, and networks.

IST 727 - Information Technology Capital Planning
School of Information Studies
3 credit(s) Upon sufficient interest
Establishment and management of information technology investment portfolios. Development and evaluation of business cases for potential and existing investments in information technology.

IST 728 - Information Security Policy
School of Information Studies
3 credit(s) At least 1x fall or spring
Designed for business, law, and technology students interested in information security as it impacts the management and operations of business and government. Information security policy and best business practices.

IST 735 - Copyright for Information Professionals
School of Information Studies
3 credit(s) At least 1x fall or spring
Geared for library and information professionals, this course provides a firm foundation in the fundamental rules of American copyright law, and equips them with the tools to make informed decisions about copyright issues.

IST 736 - Text Mining
School of Information Studies
3 credit(s) At least 1x fall or spring
Introduces concepts and methods for knowledge discovery from large amount of text data, and the application of text mining techniques for business intelligence, digital humanities, and social behavior analysis.

IST 745 - Project Portfolio and Program Management
School of Information Studies
3 credit(s) At least 1x fall or spring
Focus on the knowledge areas of IT project portfolio and program management. Emphasis on skills/techniques required to successfully manage complex, multi-project scenarios, including incremental activities involved in a multi-project IT environment.
PREREQ: IST 645

IST 747 - Complex issues in IT Project Management
School of Information Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: IST 447

IST 754 - Telecommunications and Network Management III
School of Information Studies
3 credit(s) At least 1x fall or spring
Techniques used to design, manage and secure enterprise telecommunication systems and networks. Topics include convergence, cloud, WAN, broadband, wireless, MPLs, VPN, VoIP, QoS and applications.
PREREQ: IST 653 AND IST 656

IST 755 - Final Project in Telecommunications Systems
School of Information Studies
3 credit(s) At least 1x fall or spring
Capstone and exit requirement for the M.S. in telecommunications and network management. Applies technological and business knowledge to analysis of a specific telecommunication system or networking application. Cost-benefit comparisons of competing technologies or alternative configurations.
PREREQ: IST 601 AND IST 614 AND IST 618 AND IST 653 AND IST 656

IST 759 - Planning and Designing Digital Library Services
School of Information Studies
3 credit(s) Every semester
Seminar. Integration of previous learning on the various components of management, user needs, and technologies. In-depth review and use of case studies on a range of critical information resources management areas.
PREREQ: IST 614

IST 769 - Advanced Database Administration Concepts and Database Management
School of Information Studies
3 credit(s) At least 1x fall or spring
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 659

**IST 776 - Research Methods in Information Science and Technology**
School of Information Studies

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

Philosophies, approaches, and practices of research in information science. Emphasis on underlying rationale for each procedure and on criteria for selecting procedures in a given research situation.

**PREREQ:** IST 776

**IST 777 - Statistical Methods in Information Science and Technology**
School of Information Studies

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

Classical statistical procedures used in information science. Emphasis on underlying rationale for each procedure and on criteria for selecting procedures in a given research situation.

**PREREQ:** IST 776

**IST 778 - Elicitation and Analytical Techniques for Information Science**
School of Information Studies

3 credit(s) Upon sufficient interest

Techniques for data elicitation and analysis for research in information science and technology. Includes intellectual history, assumptions, procedures, and practical experience with a range of techniques, including both qualitative and quantitative approaches.

**IST 790 - Advanced Topics in Information Organization**
School of Information Studies

1-3 credit(s) Upon sufficient interest

May include the organization of bibliographic information in libraries, information centers, and retrieval systems; vocabulary control in information retrieval systems; classification theory; problems in the organization of media.

**IST 800 - Information Studies Seminar**
School of Information Studies

1-3 credit(s) Upon sufficient interest

Selected areas within the information field, emphasizing related disciplines and their relationships to the diagnosis of information needs and the collection, storage, management, regulation and dissemination of information.

Repeatable

**IST 810 - Practicum in Research**
School of Information Studies

2 credit(s) Every semester

Practical experience in the research process. Students write proposals, discuss ongoing research, prepare critiques of research designs, and engage in all aspects of the research process.

Repeatable

**IST 820 - Seminar in Research Methods**
School of Information Studies

3 credit(s) Upon sufficient interest

Principles and applications of appropriate research techniques, including probability and statistics, sampling theory, operations research models, survey techniques, interviewing, observation, and experimental design. Problem formulation, proposal writing, preparation and presentation of final report.

**IST 830 - Seminar in Information Systems**
School of Information Studies

3 credit(s) Upon sufficient interest

Theory and practice in the analysis, design, management, and evaluation of existing and hypothetical information systems, including computerized storage and retrieval systems, libraries, management systems, and networks.

**IST 840 - Practicum in Teaching**
School of Information Studies

1-2 credit(s)

Practical experience in the teaching process. Students write syllabi, classroom assignments, or presentations; discuss ongoing teaching assignments; prepare critiques of classes; and engage in all aspects of the teaching process.

Repeatable 7 time(s), 8 credits maximum

**IST 880 - Intensive Seminar**
School of Information Studies

1 credit(s) Upon sufficient interest


Repeatable 5 time(s), 6 credits maximum

**IST 971 - Internship in Information Studies**
School of Information Studies

1-6 credit(s) Every semester

Fully supervised internship experience. Prereq: IST master's students only. Must meet GPA requirements and complete a learning agreement with site supervisor.

Repeatable 1 time(s), 6 credits maximum

**IST 972 - School Media Practicum**
School of Information Studies

1-6 credit(s) Every semester

Fully supervised and evaluated school-based library experience at the elementary and secondary levels. Includes online seminar. Must meet GPA/program requirements and complete a learning agreement with site supervisor.

Repeatable

**IST 997 - Thesis**
School of Information Studies

1-6 credit(s) Upon sufficient interest

**IST 999 - Dissertation**
School of Information Studies

1-15 credit(s) Upon sufficient interest

Repeatable
Message from Dean Boise

A legal education has never been more important than today. This nation is built on the rule of law and we need people educated in the law to strengthen, sustain and reinforce that vital foundation.

Syracuse Law is fulfilling the need for well-trained graduates through an innovative combination of doctrinal coursework taught by world-recognized faculty along with diverse experiential learning opportunities that strengthen key professional skills.

Whether you are studying constitutional law, disability law, tax law or international human rights law, you will encounter professors who will challenge you academically and inspire you personally. You can begin to apply the practical knowledge you acquire in the classroom by working with real clients in one of our nine legal clinics, gain valuable experience through externships (from here in Syracuse to Washington D.C. to London), participate in one of our moot court trial teams or edit one of our academic journals, among many other hands-on learning opportunities.

In addition, Syracuse Law hosts or participates in a number of interdisciplinary Centers and programs in conjunction with the University’s noted schools and colleges. These initiatives provide you with knowledge, experiences and skills from outside the law that will add valuable depth and perspective to your legal education and expand your range of career opportunities. Many Syracuse Law students take advantage of the 11 joint degree programs offered in cooperation with the University’s graduate schools and colleges where they can earn a Master’s degree while completing their J.D.

This interdisciplinary, experiential legal education philosophy enables Syracuse Law to not only continue our proud tradition of educating and training students to use the law as a tool in the pursuit of justice as well as in business and commerce, but to also prepare our students to use the law as a tool in the pursuit of justice as well as in business and commerce.

Joint Degree Programs

Joint degree study is an integral part of academic life in the College of Law to the extent that students who desire a greater degree of specialization may select from a number of interdisciplinary opportunities. Formal joint degree programs designed to fit career objectives are available in international relations, public administration, communications, business administration, accounting, library and information science, education, forensic science, history, philosophy, political science, and computer science as listed below.

Joint degree programs are structured so that students can earn both degrees in substantially less time than required to earn each degree separately. Students in the joint degree programs must complete their first year of study in the College of Law prior to beginning coursework in the other graduate program.

Admission to Joint Degree Programs:

Those interested in enrolling in a joint degree program must apply and be admitted to both the College of Law and the other appropriate school or college of the University. Admission to the College of Law does not guarantee one’s acceptance into another graduate program. Admission to the joint degree program shall be open to all law students who have a GPA of 2.5 or higher at the end of the 1L year. Upon approval of the student’s petition, the Senior Assistant Dean of Student Life shall recommend that the Associate Dean for Academic Affairs approve joint degree candidacy.

Students pursuing a joint degree program shall have their progress reviewed periodically. For purposes of review, the Senior Assistant Dean of Student Life in consultation with the Associate Dean for Academic Affairs will determine if satisfactory progress is being made by considering the following factors: (1) the number of and reasons for “Incompletes” in course work; (2) failure to maintain a 2.5 cumulative grade-point average in the College of Law; (3) the student’s standing in the non-law degree program; and (4) progress made and plans for satisfying the writing and optional oral defense requirements of the joint-degree program.

About the College of Law

Craig M. Boise, Dean
College of Law
Malfitano Dean’s Suite, 408 Dineen Hall
http://law.syr.edu

Academic Rules & Regulations

Academic Rules and Regulations may be found by clicking on the link below:
http://law.syr.edu/academics/academic-handbook/

Enrollment in Law Courses

On a space-available basis, matriculated Main Campus graduate students may enroll in a limited number of courses at the College of Law with special approval of the Associate Dean for Academic Affairs. Matriculated Main Campus graduate students wishing to take law courses should follow the below procedures.

Meet with an academic advisor in the Office of Student Life at the College of Law, Suite 220, prior to registration to complete the necessary forms.

If space is available, get permission and signature from the law professor to enroll in the course.

The approved forms will be submitted to the College of Law Office of Student Administration for processing.

Students should contact the dean of their home college to determine whether law courses can be applied toward their graduate degree.

The mere enrollment in a course offered by the College of Law does not constitute admission to the college. Students must be matriculated in the College of Law to receive law credit toward the J.D. degree. Consequently, law credits taken prior to admission to the College of Law will not be accepted toward the J.D. degree.
Minimum Credit Hours:

Students enrolled in joint degree programs, other than the Certificate of Graduate Study in Environmental Decision-Making at the SUNY College of Environmental Science and Forestry, must earn a minimum of 72 credit hours required for the J.D. at the College of Law. In addition, a minimum of 15 credit hours must be earned by successfully completing offerings outside the College of Law pursuant to the approved joint degree program.

Students enrolled in the Certificate of Graduate Study in Environmental Decision-Making in the SUNY College of Environmental Science and Forestry program must take Environmental Law and must earn a minimum of 78 credit hours required for the J.D. at the College of Law. In addition, a minimum of 9 credit hours must be earned by successfully completing offerings outside of the College of Law pursuant to the approved joint degree program.

Current College of Law students: please contact the College of Law Office of Student Life, Suite 220, Syracuse University College of Law, Syracuse NY 13244-1030; 315-443-1146, http://law.syr.edu/student-life/

For admissions information, please contact the College of Law Admissions Office, 315-443-1962, http://law.syr.edu/admissions

For financial aid and scholarship information, please contact the College of Law Financial Aid Office, 315-443-1962, http://law.syr.edu/financial-aid/

J.D./M.S. in Cultural Foundations of Education

The joint degree program in law and education, with a concentration in disability studies, offers students the opportunity to earn a J.D. and an M.S. in Cultural Foundations of Education. Eligible joint degree students may also earn a certificate of advanced study (CAS) in disability studies, which is a New York State-approved concentration. Disability studies applies legal, social, cultural, historical, and philosophical perspectives to the study of disability in society. Students may obtain the J.D. and M.S. in three years instead of the four necessary to earn both degrees independently. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

J.D./M.B.A. and J.D./M.B.A in Accounting or Finance

Business and industry must take public and private law into account in all decisions. The College of Law and the Martin J. Whitman School of Management have responded by creating joint degree programs in business administration and accounting. Students may obtain a J.D. and M.B.A. or J.D. and M.B.A. in accounting or finance in four years instead of the five years necessary when both programs are pursued separately. These programs are particularly appropriate for students with career objectives in corporate law, tax law, or labor law. J.D./M.B.A. students generally complete program requirements in four academic years. Program structure for the J.D./M.B.A. in accounting or finance varies substantially depending on the student's accounting and management background and desire for certification. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

J.D./M.S. in Library Science

The Juris Doctor/Master of Science in Library and Information Science is a combined degree which may be conferred by the College of Law and School of Information Studies. Students admitted to this program have the opportunity to obtain both the Juris Doctor and the M.S. in Library and Information Science in substantially less time than would be required were the two degrees obtained independently. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

J.D./M.S. in Forensic Science

For those entering the legal profession, an understanding of the scientific analysis of evidence can greatly contribute to their effectiveness both in and out of court. Both forensic science methods and their handling in court proceedings have undergone marked changes over recent years, and knowledge of both aspects will best prepare students for their future encounters with forensic evidence.

The Juris Doctor/Master of Science in Forensic Science (General Forensic Track or Forensic Laboratory Track) are combined degrees which may be conferred by the College of Law and the College of Arts and Sciences. A student who is admitted to this joint degree program has the opportunity to obtain both the J.D. degree and the M.S. Forensic Science degree in substantially less time than would be required were the two degrees to be obtained independently.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

J.D./Master in Public Administration

Students may earn a joint J.D./Master of Public Administration through the College of Law and the Maxwell School of Citizenship and Public Affairs at Syracuse University. The public administration program educates individuals to work in government agencies and in organizations that conduct substantial business with government agencies. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed. Students may obtain the J.D. and M.P.A. in three years instead of the four necessary to earn both degrees independently.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

J.D./M.A or M.S. in Communications

The Juris Doctor/Master of Science or Master of Arts in Communications are combined degrees which may be conferred by the College of Law and the S.I. Newhouse School of Public Communications. A student who is admitted to one of these programs has the opportunity to obtain both the J.D. degree and the M.S. or M.A. in communications degree in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media public policy. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations and television, radio and film. The duration of the joint program in communications varies according
to the program chosen and the student’s prior coursework.

Questions and inquiries may be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; progrec@maxwell.syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

J.D./M.A. in History

The Juris Doctor/Master of Arts in History is a joint degree which may be conferred by the College of Law and the Syracuse University Department of History. Students enrolled in this program may obtain their J.D. and M.A in History in substantially less time than would be necessary if both programs were separately pursued. Candidates for admission to the joint degree program must first gain admission to the regular program of each participating academic unit.

Questions and inquiries may be directed to Susan Branson, Professor of History and Director of Graduate Studies, Department of History, 145 Eggers Hall, 443-4144, branson@syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law, (443-1146, cabbotth@law.syr.edu).

J.D./M.A. in Economics

The Juris Doctor and Master of Arts in Economics joint degree program is designed to educate lawyers in the basics of economics so they can practice in areas of law that rely on economic information and understanding. Students interested in the J.D./M.A. in Economics program may individually arrange a joint degree program with the College of Law and the Syracuse University Department of Economics. Credit hours and other degree requirements for joint degree candidates would be discussed with the Economics Department; the College of Law allows 15 credit hours toward the J.D., taken in Economics.

Questions and inquiries may be directed to Professor Robin Paul Malloy at the College of Law 414 Dineen Hall (rpmalloy@law.syr.edu), and to Professor Stuart Brown, Economics Department, 323 Eggers Hall (ssbrown@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

J.D./M.A. in International Relations

The Juris Doctor/Master of Arts in International Relations is a combined degree which is conferred by the College of Law and the International Relations program in the Maxwell School of Citizenship and Public Affairs. This joint degree program offers students a unique opportunity to develop the knowledge and skills necessary to enter into a career in the international field, including a basic social science understanding of international relations as well as contemporary features of international affairs. The student may specialize in a specific area of interest such as: international economics, finance and trade; peace, security and conflict; governance, diplomacy and international organizations; democracy, development and humanitarian assistance; and regional concentrations.

Questions and inquiries may be addressed to Joshua Kennedy, Associate Director of Graduate Studies, 215 Eggers Hall, Maxwell School of Citizenship and Public Affairs (443-4000; jjkenn01@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

J.D./M.A. and Ph.D. in Political Science

The Juris Doctor/Master of Arts and Juris Doctor/Doctor of Philosophy in Political Science are joint degrees which may be conferred by the College of Law and the Syracuse University Political Science Department. Students enrolled in these programs may obtain their J.D./M.A. or J.D./Ph.D. in Political Science in substantially less time than would be necessary if both programs were separately pursued.

Questions and inquiries may be directed to Professor Glyn Morgan, Director of Graduate Studies, Maxwell School of Citizenship and Public Affairs (rgmorgan@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

J.D./M.A. in Philosophy and J.D./Doctor of Philosophy

The Juris Doctor/Master of Arts in Philosophy and Juris Doctor/Doctor of Philosophy are joint degrees which may be conferred by the College of Law and the Syracuse University Department of Philosophy. Students enrolled in these programs may obtain their J.D. and M.A or Ph.D. in Philosophy in substantially less time than would be necessary if both programs were separately pursued.

Questions concerning and general inquiries may be directed to Professor Thomas McKay, Philosophy Department, 541 Hall of Languages (443-2536; tmckay@syr.edu). Students with questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

J.D./Master of Social Work

The Juris Doctor/Master of Social Work is a joint degree which is conferred by both the Syracuse University College of Law and the Syracuse University School of Social Work. Students enrolled in this program may obtain their J.D. and M.S.W. in substantially less time than would be necessary if both programs were separately pursued.

Questions and general inquiries may be directed to Adrienne Rentfroe, LMSW, Coordinator of Graduate Admissions, 419 Sims Hall (443-1443; aренfo@syrs.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, College of Law, Suite 220 (443-1146; cabbotth@law.syr.edu).

Master of Laws (LL.M.)

Syracuse University College of Law LL.M. Program

The Master of Laws (LL.M.) for foreign students at Syracuse University College of Law is a 24-credit hour graduate Law program designed to offer students with a foreign law degree or its equivalent, advanced study in American law. We encourage prospective students to enroll at one of New York State’s most prestigious private law schools, located on the Syracuse University campus in Syracuse, New York. Our LL.M. program is designed to offer foreign legal professionals the opportunity to broaden their effectiveness through the study of U.S. laws and the American legal process.

Message from the Director

Welcome to the Syracuse University College of Law, Master of Laws (LL.M.) program in American Law. Syracuse University is dedicated to welcoming students to this program from varied legal backgrounds and nations. Whether you are seeking a comprehensive overview of the American system of laws or seek to specialize in concentrated areas of course work, the LL.M. will provide you with that knowledge and expertise.

This program invites foreign law graduates, legal professionals, patent agents and those who are otherwise licensed to practice law in their home jurisdictions. We seek candidates from diverse legal backgrounds, including corporate, government, private practice, judicial and academic.

Students will enroll in three foundational courses designed for the LL.M. program; one to introduce the students to the basics of the American legal system, a second in Legal Writing, and a third course devoted to skills-based strategies for success in the program. The remainder of the program allows LL.M. candidates to take classes alongside our J.D. student population and to tailor their own experience in the LL.M. from among the superb and diverse courses offered at the College.
With a storied history of international engagement, Syracuse welcomes you to our University and to your discovery of American law.

Sincerely,
Aviva Abramovsky
Associate Dean for International Initiatives
Professor of Law
Phone: 315.443.1786
Email: aabramov@law.syr.edu

Train with London's Leading Legal Practitioners

Syracuse University College of Law proudly offers one of the nation’s longest-running Law in London programs, where students learn from London’s leading legal practitioners. During an eight-week summer experience, students gain international exposure to clients, partner with professionals for personalized mentoring, and enjoy boundless cultural opportunities-in one of the world’s most dynamic cities.

Who is eligible?

Any full-time or part-time American or Canadian law student who is in good standing at his or her current institution is encouraged to apply. The program is approved by the ABA and is offered as part of the fully accredited curriculum of Syracuse University College of Law.

Will this impact my career?

Rigorous coursework and hands-on learning experiences cultivate a student's ability to pursue a career in international law. Individuals who attend the Law in London program are supervised by American faculty who assist with housing, internships, and mentoring. Students engage in a variety of organized internship placements in criminal law and trial law, at financial and governmental institutions, and in corporate settings.

More information regarding the Law in London program may be found at:

Apply today!

February 15 is the deadline to apply for the summer Law in London experience. For more information, contact Associate Dean for Academic Affairs Chris Day at ccday@law.syr.edu or Associate Dean for International Initiatives Aviva Abramovsky at aabramov@law.syr.edu.

Law, LLM

Program Requirements

The Master of Laws (LL.M.) for foreign students at Syracuse University College of Law is a 24-credit program designed to offer students with a foreign (non-U.S.) law degree or its equivalent, advanced study in American law. This program is exclusively available to graduates in law from foreign academic institutions or those who are otherwise licensed to practice law in their home jurisdictions. We seek people from diverse legal backgrounds, including corporate, government, private practice, judicial and academic.

In this one-year residential program, each student will take two basic foundational courses together. One to introduce the students to basics of the American Legal system and a second in Legal Writing with a third required research seminar of their choice. The remainder of the program allows the student to tailor their own experience in the LL.M. from among the superb and diverse courses offered at the College.

Public Health, MPH

Michael Wasylenko, Ph.D., Senior Associate Dean, Maxwell School
200 Eggers Hall; 315-443-2253; mjwasylen@maxwell.syr.edu
www.upstate.edu/cnymph

Program Requirements

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 David B. Falk College of Sport and Human Dynamics, the L.C. Smith College of Engineering and Computer Science, and the College of Law.

The program is designed to prepare students in the basic knowledge areas in public health through a core curriculum of required courses; extend that knowledge through elective coursework and through practical skills honed in field experiences; and demonstrate an integration of that knowledge through a culminating experience. The basic knowledge areas include: biostatistics, epidemiology, environmental health, health policy and management and social and behavioral sciences. A minimum of 42 credits is required for the degree, consistent with the accreditation criteria for public health programs promulgated by the Council on Education for Public Health. The M.P.H. student body consists of individuals with a variety of backgrounds and preparations, including students directly out of undergraduate school with a relevant baccalaureate degree as well as professionals with graduate degrees and significant work experience in public health administration or clinical care. Students will be prepared for career opportunities in public health administration, leadership roles in private agencies involved in public health delivery and advocacy, research, and clinical care broadened by an understanding of the health care delivery system and grounded in public health practice.

Law, JD

Program Requirements

The Master of Laws (LL.M.) for foreign students at Syracuse University College of Law is a 24-credit hour graduate program designed to offer students with a foreign (non-U.S.) law degree or its equivalent, advanced study in American law. This program is exclusively available to graduates in law from foreign academic institutions or those who are otherwise licensed to practice law in their home jurisdictions. We seek people from diverse legal backgrounds, including corporate, government, private practice, judicial and academic.

In this one-year residential program, each student will take two basic foundational courses together. One to introduce the students to basics of the American Legal system and a second in Legal Writing with a third required research seminar of their choice. The remainder of the program allows the student to tailor their own experience in the LL.M. from among the superb and diverse courses offered at the College.
complete a minimum of 87 credits. Each student must earn a cumulative grade point average and a final-year grade point average of 2.2 on a 4.0 scale to satisfactorily complete the course of study.

For further information regarding admissions, please contact the College of Law Admissions Office, 315-443-1962, admissions@law.syr.edu

For further information regarding Scholarships and Financial Aid, please contact the College of Law Financial Aid Office, 315-443-1962, financialaid@law.syr.edu

For further information regarding academic programs, and policies, please contact the College of Law Office of Student Life, 315-443-1146, studentlife@law.syr.edu

**Accounting, JD/MBA**

**Degree Requirements**

Business and industry must take public and private law into account in all decisions. The College of Law and the Martin J. Whitman School of Management have responded by creating joint degree programs in business administration and accounting. Students may obtain a J.D. and M.B.A. or J.D. M.B.A. in accounting or finance in four years instead of the five years necessary when both programs are pursued separately. These programs are particularly appropriate for students with career objectives in corporate law, tax law, or labor law. J.D./M.B.A. students generally complete program requirements in four academic years. Program structure for the J.D./M.B.A. in accounting or finance varies substantially depending on the student's accounting and management background and desire for certification. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbboth@law.syr.edu).

**Finance, JD/MBA**

**Degree Requirements**

Business and industry must take public and private law into account in all decisions. The College of Law and the Martin J. Whitman School of Management have responded by creating joint degree programs in business administration and accounting. Students may obtain a J.D. and M.B.A. or J.D. M.B.A. in accounting or finance in four years instead of the five years necessary when both programs are pursued separately. These programs are particularly appropriate for students with career objectives in corporate law, tax law, or labor law. J.D./M.B.A. students generally complete program requirements in four academic years. Program structure for the J.D./M.B.A. in accounting or finance varies substantially depending on the student's accounting and management background and desire for certification. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbboth@law.syr.edu).

**Law and Arts Journalism, JD/MA**

**Degree Requirements:**

The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A, as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pcgrad@syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbboth@law.syr.edu).

**Law/Computer Science, JD/MS**

**Law/Computer Science**

The Juris Doctor and Master of Science are combined degrees which may be conferred by the College of Law and Syracuse University's L.C. Smith College of Engineering and Computer Science (LCS). A J.D./M.S. in Computer Science could significantly enhance the scope of a student's legal education in areas such as computers, technology and intellectual property law. Students enrolled in this joint degree program may obtain their J.D. and M.S. degrees in substantially less time than would be necessary if the two programs were pursued separately.
Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/Documentary Film & History, JD/MA

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A, as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrad@syre.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/Forensic Science, JD/MA

Law/Forensic Science

For those entering the legal profession, an understanding of the scientific analysis of evidence can greatly contribute to the effectiveness both in and out of court. Both forensic science methods and their handling in court proceedings have undergone marked changes over recent years, and knowledge of both aspects will best prepare students for their future encounters with forensic evidence.

The Juris Doctor/Master's of Science in Forensic Science (General Forensic Track or Forensic Laboratory Track) are combined degrees which may be conferred by the College of Arts and Sciences and the College of Law. A student who is admitted to one of these programs has the opportunity to obtain both the J.D. degree and the M.S. Forensic Science degree in substantially less time than would be required were the two degrees to be obtained independently.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/History, JD/MA

Degree Requirements

The Juris Doctor/Master of Arts in History is a joint degree which may be conferred by the College of Law and the Syracuse University Department of History. The students enrolled in this program may obtain their J.D. and M.A in History in substantially less time than would be necessary if both programs were separately pursued. Candidates for admission to the joint degree program must first gain admission to the regular program of each participating academic unit.

Questions and inquiries may be directed to Susan Branson, Professor of History and Director of Graduate Studies, Department of History, 145 Eggers Hall, 443-4144, branson@syre.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 444 College of Law, 443-1146, cabbotth@law.syr.edu.

Law/International Relations, JD/MA

Degree Requirements

The Juris Doctor/Master of Arts in International Relations is a combined degree which is conferred by the International Relations program of the Maxwell School of Citizenship and Public Affairs and the College of Law. This joint degree program offers students a unique opportunity in developing the knowledge and skills necessary to enter into a career in the international field, including a basic social science understanding of international relations as well as contemporary features of international affairs. The student may specialize in a specific area of interest such as Global Markets, Negotiation and Conflict Resolution, Global Development Policy, Global Security, Transnational Organizations and Leadership, and Foreign Policy.

Students must apply and be admitted to both programs separately and will complete the entire first year in the College of Law prior to their admission to the Master of Arts in International Relations.

In three years, students complete the core requirements for both the Juris Doctor and Master of Arts in International Relations degree, beginning their dual studies between their 1L and 2L years. In addition to the core, students complete specialized coursework in one of the following five international relations career tracks: international economics, finance and trade; peace, security and conflict; governance, diplomacy and international organizations; democracy, development and humanitarian assistance; and regional concentrations in Africa, Asia, Europe, Latin America, the Caribbean, and the Middle East.

Students also complete an applied internship opportunities linking academic studies in law and international relations with the professional practice of international relations.

Questions and inquiries may be addressed to Christine Omlino,Director, Admissions and Financial Aid, Department of Public Administration and International Affairs, 215 Eggers Hall, Maxwell School of Citizenship and Public Affairs (443-4000; comolino@syre.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/Magazine, Newspaper & Online Journalism, JD/MA

Degree Requirements

The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A, as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrad@syre.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 444 College of Law, 443-1146, cabbotth@law.syr.edu.

Law/Media Management, JD/MS

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A., as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrass@syrsy.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Philosophy, JD/PhD

Law/Philosophy

The Juris Doctor/Master of Arts in Philosophy and Juris Doctor/Doctor of Philosophy are joint degrees which may be conferred by the College of Law and the Syracuse University Department of Philosophy. Students enrolled in these programs may obtain their J.D. and M.A. or Ph.D. in Philosophy in substantially less time than would be necessary if both programs were separately pursued.

Questions concerning and general inquiries should be directed to Professor Thomas McKay, Philosophy Department, 541 Hall of Languages (443-2536; tmckay@syrsy.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Photography, JD/MS

Degree Requirements:

The Juris Doctor/Master of Arts or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A., as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrass@syrsy.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Political Science, JD/MA

Degree Requirements

The Juris Doctor/Master of Arts in Political Science and Juris Doctor/Doctor of Philosophy in Political Science are joint degrees which may be conferred by the College of Law and the Syracuse University Political Science Department. Students enrolled in these programs may obtain their J.D./M.A. or J.D./Ph.D. in Political Science in substantially less time than would be necessary if both programs were separately pursued.

Questions and inquiries should be directed to Professor Seth Jolly, Director of Graduate Studies, (skjolly@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Director for Academic and Bar Support, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Public Administration, JD/MPA

Degree Requirements

A longstanding and popular joint degree exists between the Department of Public Administration of the Maxwell School for Citizenship and Public Affairs and Syracuse University’s College of Law. Students prepare for a career at the nexus of law and public administration with the JD/MPA degree. Students must apply and be admitted to both programs separately and will complete the entire first year in the College of Law prior to matriculation into the MPA degree. Due to the calendar nature of the MPA program, this challenging joint degree, one of the oldest of its kind anywhere, can be completed in three years (the same time needed for a JD alone).

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law.
Law/Public Relations, JD/MS

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A., as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrad@syrs.edu) or visit newhousegrad.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

Library and Information Science, JD/MS

Degree Requirements:
The Juris Doctor/Master of Science in Library and Information Science is a combined degree which may be conferred by the School of Information Studies and the College of Law. Students admitted to this program have the opportunity to obtain both the Juris Doctor and the M.S. in Library and Information Science in substantially less time than would be required were the two degrees obtained independently. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

National Security and Counterterrorism Law, CAS

Admission:
The program is open to students matriculated into law and graduate programs at Syracuse University. Students must meet the requirements of their respective colleges.

Satisfactory Progress:

Film, JD/MA

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A., as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrad@syrs.edu) or visit newhousegrad.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

Law/Television, Radio & Film, JD/MA

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A., as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pgrad@syrs.edu) or visit newhousegrad.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

Law/Social Work

(Licensed Clinical), JD/MSW

Degree Requirements:
The Juris Doctor/Master of Social Work is a joint degree which is conferred by both the Syracuse University College of Law and the Syracuse University School of Social Work. Students enrolled in this program may obtain their J.D. and M.S.W. in substantially less time than would be necessary if both programs were separately pursued.

Questions and general inquiries should be directed to Adrienne Renfroe, LMSW, Coordinator of Graduate Admissions, 268 White Hall (443-1443; arenfroe@syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

Contact:

Keli Perrin
Assistant Director, Institute for National Security and Counterterrorism
300 Dineen Hall
315-443-2284
kaperrin@law.syr.edu

Faculty:

William C. Banks, Director, INSCT and Board of Advisors Distinguished Professor; David M. Crane, Professor of Practice; James Steinberg, Dean, Maxwell School University Professor of Social Science, International Affairs and Law; Robert B. Murrett, Deputy Director, INSCT and Professor; Nathan Sales, Associate Professor of Law; William C. Snyder, Visiting Professor of Law; Tara Helfman, Associate Professor of Law; Keli A. Perrin, Assistant Director, INSCT and Adjunct Professor; Renee de Nevers, Associate Professor; Corri Zoli, INSCT Director of Research and Research Assistant Professor; Isaac Kfir, Visiting Assistant Professor.

Description:
The CAS in National Security and Counterterrorism Law will be an interdisciplinary, 15-credit program of study for law and graduate students specializing in national security, homeland security, counterterrorism, cybersecurity, and related fields. The interdisciplinary nature of the CAS will enrich the students' legal understanding as program recipients collaborate with students and faculty from a range of disciplines, including public administration, international relations, political science, communications, and history. Students benefit from the expertise of faculty in military planning and operations, global counterterrorism and arms control policy, counter-proliferation policy, diplomacy and international relations, mass communication, terrorist methods and psychology, history, and economics.

15 credits in security-related coursework give students a solid understanding of:
- The legal framework for national security decision-making, including the respective powers of the President, Congress, and the Judiciary.
- The legal authorities governing the use of military force, intelligence operations, and public access to national security information.
- US and international responses to terrorism, including law enforcement, intelligence, military, and diplomatic approaches to counterterrorism.
- The challenges of homeland security preparedness and response.

Admission:
The program is open to students matriculated into law and graduate programs at Syracuse University. Students must meet the requirements of their respective colleges.
Maintain a 3.0 GPA average in all courses. No courses may be taken pass/fail.

Required Courses: Must take TWO courses (6 Credits)
- LAW 700 - National Security Law 3 credit(s)
- LAW 790 - Counterterrorism and the Law 3 credit(s)
- PAI 730 - Problems in Public Administration 1-3 credit(s)
- LAW 871 - Foreign Relations 3 credit(s)
- LAW 832 - Cyber Security Law and Policy 3 credit(s)
- LAW 822 - National Security & Counter Terrorism Research Center 3 credit(s)

Electives: Must take THREE courses (9 Credits)
Each semester INSCT reviews the course offerings in the law school and the graduate schools to identify courses that count as electives. INSCT also evaluates any new course offerings for inclusion in the program at that time.

All Students Must Complete the Writing Requirement:
- An academic paper on a security topic that satisfies the upper class writing requirement for Syracuse Law; OR
- Students may take at least one course that requires a significant written product on a security topic: LAW 883 or LAW 822
- Complete the Capstone Project:
  - Examples of a Capstone Project include, but are not limited to, a research paper, clinical work, an externship, or a substantial collaborative project. The project must be approved by the Program Director; OR
  - Students may take one or both of two classes whose cumulative work constitutes a Capstone Project: LAW 883 or LAW 822

Areas of Specialization:
- Building Institutional Capacity
- Building the Rule of Law
- Providing Humanitarian Relief
- Assuring Security and Demilitarizing Politics
- Promoting Reconciliation and Peacebuilding
- Building Civil Society
- Revitalizing Postconflict Economies

Questions about the Program can be directed to Keli Perrin (kaperrin@law.syr.edu) or by calling INSCT at 315.443.2284.

Certificate Requirements

1) Required Core Course
   (Mandatory/three credits):
   - PAI 719 - Fundamentals of Post-Conflict Reconstruction 3 credit(s)

2) Secondary Core Course
   (Choose one/three credits):
   - Civil Wars & State-Building (PAI 730)
   - Economics of Development (ECN 651/PAI 757)
   - Rule of Law in Postconflict Reconstruction (LAW 813)
   - Fundamentals of Conflict Studies (PAI 601/SOC 601)
   - Humanitarian Action: Challenges, Responses, Results (PAI 765)
   - Multilateral Peacekeeping (ANT/PAI 701)

4) PCR Capstone Project/Internship:
   - PAI 996 - Master’s Project Paper 3 credit(s)
   - EMPA/EMIR Masters Project
   - PAI 670 - Experience Credit 1-6 credit(s)
   - PAI 690 - Experience Credit

Postconflict Reconstruction, CAS
Director, William C. Banks
300 Dineen Hall
315-443-2284

The Certificate of Advanced Study in Postconflict Reconstruction (PCR) provides students a documented concentration and familiarization with the major aspects of PCR, the various dimensions and goals of postconflict work, the types of actors that conduct it, the trade-offs and dilemmas they face, and the lessons learned from its application across various settings. This CAS offers the analytical tools to help students be successful in public service careers in the fields of PCR and international development.

12 credits of PCR-related coursework give students provide:
- Analytical techniques that are tailored for work in international development communities.
- A better understanding of how the US and the international community can effectively participate in rebuilding shattered societies.
- New ways of thinking about the nature of conflict, cooperation, and national security.

Graduate and law CAS candidates complete 12 credits (three courses and one capstone project or internship) through a sequence of specialized, interdisciplinary coursework and coordinated professional development experiences at SU’s Maxwell School, College of Law, Whitman School, and Newhouse School.
College of Law Faculty

Aviva Abramovsksy, Associate Dean for International Initiatives; Professor of Law; Director of the LL.M. Program for Foreign Law Graduates; Co-Director, Law in London Program, Kauffman Professor of Entrepreneurship and Innovation
J.D., University of Pennsylvania, 2000
Commercial Transactions; Insurance Law; Professional Responsibility

Rakesh K. Anand, Professor of Law
J.D., Yale University, 1994
Professional Responsibility; Legal Ethics Theory; Contemporary Legal Thought; Constitutional Law II; Criminal Law

Hannah R. Arterian, Professor of Law
J.D., University of Iowa, 1973
Employment Law

Robert H.A. Ashford, Bond, Schoeneck & King Distinguished Professor
J.D., Harvard University, 1969
Secured Transactions; Binary Economics; Corporations; Professional Responsibility

Elizabeth A. August, Legal Writing Professor
J.D., Syracuse University College of Law, 1994
Legal Communications and Research

William C. Banks, Board of Advisors Distinguished Professor; Professor of Law; Professor of Public Administration and International Affairs, Maxwell School of Citizenship and Public Affairs; Director, Institute for National Security and Counterterrorism (INSCNT)
J.D., University of Denver, 1974; M.S., University of Denver, 1982
Central Challenges in National Security Law Seminar

Joseph A. Barrette, Professor Emeritus
J.D., Catholic University, 1972

Peter A. Bell, Professor of Law
J.D., Stanford University, 1970
Torts; Public Health Law; International Trade Law

Leslie Bender, Professor Emerita
J.D., University of Pittsburgh, 1979; LL.M., Harvard University, 1985
Constitutional Law; Civil Rights, Race and Law; Bioethics and Law; Torts

Todd A. Berger, Associate Professor of Law; Director, Criminal Defense Law Clinic
J.D., Temple University 2003; LL.M. Temple University 2007
Criminal Defense Clinic; Criminal Procedure

Peter D. Blanck, University Professor; Chairman, Burton Blatt Institute
J.D., Stanford University, 1986; Ph.D., Harvard University, 1982
Disability Law

Craig M. Boise, Dean and Professor of Law
J.D., University of Chicago Law School, 1994; LL.M. (Tax), New York University School of Law 1999

Keith J. Bybee, Paul E. and Hon. Joanne F Alper ’72 Judiciary Studies Professor; Professor of Law; Professor of Political Science; Director, Institute for the Study of the Judiciary, Politics, and the Media (UPM); Senior Research Associate, Campbell Public Affairs Institute
A.B., Princeton University 1987; Ph.D., University of California at San Diego, 1995
Constitutional Law I and II; Law, Politics, and the Media (UPM); Elements of the Law

Sanjay K. Chhablani, Bond, Professor of Law; Professor, Forensic and National Security Sciences Institute, College of Arts and Sciences (by courtesy appointment)
J.D., Yale Law School, 1996
Constitutional Criminal Procedure; Criminal Law; Capital Punishment; Evidence; Forensic Evidence

David M. Crane, Professor of Practice
M.A., Ohio University, 1973; J.D., Syracuse University, 1980
National Security Law; Laws of Armed Conflict; Atrocity Law and Policy-Practicing before International Courts; Military Law and Procedure; International Criminal/Civil Law and Procedure

Christian C. Day, Professor of Law; Co-Director, Law in London Program;
J.D., New York University, 1970
Business Associations

Lisa A. Dolak, Senior Vice President and University Secretary; Angela S. Cooney Professor of Law; J.D., Syracuse University College of Law, 1988
Civil Procedure; Federal Courts; Law, Politics and the Media; Patents and Trade Secrets

David M. Driesen, University Professor
J.D., Yale Law School, 1989
Climate Change: Science, Perception and Policy; Environmental Law

Richard A. Ellison, Professor Emeritus
LL.B., St. John’s University, 1965
Constitutional Law; Contracts; Health Law; Family Law

Martin L. Fried, Professor Emeritus
J.D., Columbia University, 1958; LL.M. (Tax), New York University, 1968
Federal Income Taxation; Property; Wills and Trusts

Ian Gallacher, Professor of Law; Director, Legal Communication and Research
J.D., Washington College of Law, American University, 1991
Legal Communications and Research

Gregory L. Germain, Professor of Law
J.D., University of California, Hastings College of the Media; Federal Government and the Media; Federal University, 1985
Constitutional Criminal Procedure (Investigative); Criminal Law; Evidence

Andrew S. Greenberg, Legal Writing Professor
J.D., Syracuse University College of Law, 1989
Legal Communication and Research I; Legal Communication and Research II; Legal Communication and Research III; Writing in Pretrial Litigation

Margaret M. Harding, Associate Dean for Faculty; Professor of Law
J.D., Georgetown University Law Center, 1986
Civil Procedure; Conflict of Laws; Securities Regulation; Alternative Dispute Resolution

Tara Hoffman, Associate Professor of Law
J.D., Yale University, 2006
Contracts; Constitutional Law; International Law; Law of the Sea

Peter E. Herzog, Professor Emeritus
J.D., Syracuse University College of Law, 1955; LL.M., Columbia University, 1956
Comparative Law; European Communities; Conflict of Laws

Jason D. Hoge, Practitioner in Residence
J.D. City University of New York School of Law, 2004
Criminal Defense Clinic

Paula C. Johnson, Professor of Law
J.D., Temple University, 1985; LL.M., Georgetown University Law Center, 1990
Cold Case Justice Initiative - investigating and reopening civil rights era murders

Hilary K. Josephs, Professor Emerita
Ph.D., Harvard University, 1973; J.D., University of Hawaii, 1978
Chinese law; Contracts; International and Comparative Labor Law

Arlene S. Kanter, Laura J. and Douglas Meredith Professor for Teaching Excellence; Professor of Law; Director, College of Law Disability Law and Policy Program; Co-Director, SU Center of Human Policy, Law, and Disability Studies
J.D., New York University, 1981; LL.M., Georgetown University Law Center, 1983
Disability Law; International Human Rights and Comparative Disability Law; Special Education; Advanced Disability Law

Gary T. Kelder, Professor of Law
J.D., Boston University, 1971; LL.M., New York University, 1972
Constitutional Criminal Procedure; Criminal Law; Evidence; Advanced Criminal Evidence

Deborah Kenn, Associate Dean of Clinical and Experiential Education; Professor of Law; Director, Office of Clinical Legal Education; Director, Community Development Law Clinic
J.D., State University of New York at Buffalo, 1980
Community Development Law Clinic; Social and Economic Justice in South Africa

Andrew Kim, Associate Professor of Law
J.D., Harvard Law School, 2007
Torts; Immigration Law; Administrative Law

Nina A. Kohn, Associate Dean for Research; David M. Levy L48 Professor of Law
J.D., Harvard University, 2002
Elder Law; Family Law; Torts

Laura G. Lapte, Associate Professor of Law
J.D., University of North Carolina, Chapel Hill, 1985
Copyright-Literary and Artistic works; Entertainment Law; Intellectual Property; Property Law
Lynn S. Levey, Legal Writing Professor
J.D., Syracuse University College of Law, 1994; M.A., Syracuse University, 1994
Legal Communication and Research; Violence Against Women Act

Travis H.D. Lewin, Professor Emeritus
LL.B., University of South Dakota, 1958; S.J.D., University of Michigan, 1967
Evidence; Trial Practice

Kevin Noble Maillard, Professor of Law
J.D., University of Pennsylvania Law School, 2002; M.A., Ph.D., University of Michigan, 2004
Family Law; Adoption; Popular Culture and the Law; Wills and Trusts; Social Deviance and the Law; Children and the Law

Robin Paul Malloy, E.I. White Chair and Distinguished Professor of Law; Kauffman Professor of Entrepreneurship and Innovation; Director, Center on Property, Citizenship and Social Entrepreneurism; Professor of Economics, Maxwell School of Citizenship and Public Affairs (by courtesy appointment)
J.D., University of Florida, 1980; LL.M., University of Illinois, 1983
Real Estate Transactions; Land Use Planning and Development Law

Thomas J. Maroney, Professor Emeritus
LL.B., Syracuse University College of Law, 1963
Constitutional Law; Constitutional Criminal Procedure; Federal Courts

Janis L. McDonald, Professor of Law
J.D., Hofstra University School of Law, 1977; LL.M., Yale Law School, 1988
Cold Case Justice Initiative - investigating and reopening civil rights era murders

Mary Helen McNeal, Professor of Law; Director, Elder Law Clinic
J.D., University of Maryland, 1986
Elder Law Clinic; Professional Responsibility

Suzette M. Meléndez, Lecturer; Director, Children’s Rights and Family Law Clinic; Director, Syracuse Medical-Legal Partnership
J.D., University of Connecticut, 1989
Children’s Rights and Family Law Clinic

Aliza M. Milner, Legal Writing Professor
J.D., George Washington University, 1998
Legal Communication and Research I; Legal Communication and Research II; Civil Procedure; Sentencing Law

Robert G. Nassau, Professor of Practice; Associate Director, Office of Clinical Legal Education; Director, Low Income Taxpayer Clinic
J.D., Harvard University, 1986
Federal Income Taxation I; Federal Income Taxation II; Estate and Gift Taxation; Low Income Taxpayer Clinic; Low Income Taxpayer Clinic II

Kathleen M. O’Connor, Legal Writing Professor; Faculty Director, Moot Court Honor Society and Advocacy
J.D., Emory University, 1992
Legal Communications and Research

Ann E. Pfeiffer, Practitioner in Residence
J.D., State University of New York at Buffalo, 1979
Externship Program

Robert J. Rabin, Professor Emeritus
LL.B., Harvard Law School, 1964; LL.M., New York University, 1965
Contracts; Labor Law

Sarah H. Ramsey, Professor Emerita
J.D., University of North Carolina, 1973; LL.M., University of Michigan, 1982
Children and the Law; Family Law

LaVonda N. Reed, University Associate Provost for Faculty Affairs; Professor of Law
J.D., University of Southern California, 1997
Communications Law; Property; Wills and Trusts

Richard S. Risman, Legal Writing Professor
J.D., State University of New York at Buffalo, 1984
Legal Communication and Research; Foundation Skills for Attorney Licensing

Shannon P. Ryan, Legal Writing Professor
J.D., Loyola Law School, 1994
Legal Communication and Research

Nathan A. Sales, Associate Professor of Law
J.D., Duke School of Law, 2000
National Security Law; Administrative Law; Criminal Law

Michael A. Schwartz, Associate Professor of Law; Director, Disability Rights Clinic
J.D., New York University, 1981; LL.M., Columbia University, 1977; Ph.D., Syracuse University, 2006
Disability Rights Clinic Seminar

Richard D. Schwartz, Professor Emeritus
Ph.D., Yale University, 1952

C. Cora True-Frost, Associate Professor of Law
Criminal Law; Regulatory Law and Policy

Terry L. Turnipseed, Professor of Law; Director, Syracuse Law Semester in D.C. Program; Professor of Engineering and Computer Science, L.C. Smith College of Engineering and Computer Science (by courtesy appointment).
J.D., Georgetown University, 1996; LL.M., Georgetown University, 1998
Estate Planning; Property Law; Wills and Trusts; Washington Lawyer Seminar; Syracuse Law in D.C. Program Externship Placement

A. Joseph Warburton, Associate Professor of Law and Finance
Ph.D., University of Michigan, 2009; M.S., University of London, 2002; J.D., Michigan Law School, 1996; M.A., University of Pennsylvania, 1994
Commercial Transactions; Corporate Financing Transactions; Financial Management

Steven S. Wechsler, Professor Emeritus
M.B.A., J.D., University of Michigan, 1975
Lawyer as Negotiator; Professional Responsibility

William M. Wieck, Professor Emeritus
LL.B., Harvard University, 1962; Ph.D., University of Wisconsin, 1968
Constitutional Law; Federal Courts
College of Law

Courses

Law

LAW 530 - Negotiation
College of Law

1 credit(s) Irregularly
The course will emphasize learning the skills of negotiation by simulations in which students will negotiate and watch their classmates negotiate. Class members will conduct three negotiations, a simple sales contract, a retainer agreement between an attorney and a client, and a complex multi-party dispute.

LAW 601 - Civil Procedure
College of Law

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

LAW 602 - Constitutional Law
College of Law

3 credit(s) At least 1x fall or spring
This course covers (1) Judicial Review in all its aspects, including the Case and Controversy Doctrine, and (2) Structure, that is, Federalism (Federal and State regulatory and taxing powers) and Separation of Powers/Checks and Balances among the branches of the federal government.

LAW 603 - Contracts
College of Law

5 credit(s) At least 1x fall or spring
Legal protection afforded promissory agreements. Contract interpretation; contract formation, including offer and acceptance, mutual assent, and consideration. Parties affected by contracts and remedies for breach of contract.

LAW 604 - Criminal Law
College of Law

3 credit(s) At least 1x fall or spring
Elements of various crimes and problems of statutory construction and interpretation. Substantive defenses, emphasizing the defense of insanity, as well as attempts and the specific crimes of conspiracy, theft, and homicide.

LAW 607 - Property
College of Law

5 credit(s) At least 1x fall or spring
Problems concerning the possession of land and chattels. Methods of acquiring title to personal property, possessory and concurrent estates, and landlord and tenant problems. Historical introduction to real estate, including future interest, real covenants, and easements.

LAW 608 - Torts
College of Law

5 credit(s) At least 1x fall or spring
Imposition of liability for personal wrongs as viewed by traditional tort law and current alternatives. Historical development and policy basis of liability for various types of injury-producing conduct, including intentional torts, negligence, and strict liability.

LAW 609 - Legal Communications and Research I & II
College of Law

2 credit(s) Every semester
Fall Semester: Introduction to basic lawyering skills, including legal analysis, citation, and court hierarchy and application of these skills to complex factual situations in a mock law firm setting. Spring Semester: Continuation of Legal Communications and Research. Skills introduced this semester include legal research, oral argument, and the written presentation of legal arguments in persuasive form.

Repeatable

LAW 630 - Negotiation
College of Law

1 credit(s) Irregularly
The course will emphasize learning the skills of negotiation by simulations in which students will negotiate and watch their classmates negotiate. Class members will conduct three negotiations, a simple sales contract, a retainer agreement between an attorney and a client, and a complex multi-party dispute.

LAW 640 - Fact Investigation and Analysis
College of Law

3 credit(s) At least 1x fall or spring
An introduction to the world of fact investigation and analysis, this course will provide an overview of how to develop and scrutinize facts. The course will cover five major topics: 1) How lawyers gather facts; 2) How lawyers evaluate evidence/facts; 3) How to organize evidence into a comprehensive narrative; 4) How human memory, biases, and perception affect fact gathering; and 5) The ethical issues surrounding fact investigations. The course will involve a significant interactive skill development component including mock interviews, drafting exercises, guest speakers, and hands-on investigation exercises.

LAW 642 - Introduction to Legal Practice: Applying Contracts, Torts, and Civil Procedure
College of Law

3 credit(s) At least 1x fall or spring
This course translates theory into practice through a semester-long simulation of legal work. Building upon students' mastery of Torts, Contracts, and Civil Procedure, this course introduces students to essential lawyering skills including client relations, negotiations, interviewing, drafting, motion practice, and discovery. The course will also focus on professional identity issues as they arise in the context of the applied learning of the practice of law.

LAW 643 - Land Use Planning and Zoning
Law: An Applied Property Course
College of Law

3 credit(s) At least 1x fall or spring
The course will provide an applied property experience focused on learning strategic lawyering and practice oriented skills while developing knowledge about land use law and the administrative regulatory process. The course will be structured around three important elements: 1) Learning by observing and interacting with local zoning board officials; 2) Translating knowledge into strategic action by focusing on how to use the law to advance your client's interest; and 3) Solving real world and practice-based problems developed from actual zoning application files.

LAW 644 - National Security Lawyering
College of Law

3 credit(s) At least 1x fall or spring
The central goal of this course is to equip students with skills required to practice law in a political and bureaucratic context. It will teach students about the organizational structure of the national security infrastructure; how key figures make, implement, and oversee policy and operational decisions; and the unusually diverse array of legal materials that regulate national security players and thus constitute the "law" of national security law.

LAW 645 - Negotiation for Lawyers
College of Law

3 credit(s) At least 1x fall or spring
This course will introduce students to the theory and practice of negotiation. Students will learn basic negotiation skills and will be introduced to a variety of other skills including: valuation of a client's position; interviewing; business communications; and basic drafting.

LAW 646 - Problem Solving and Intelligent Lawyering
College of Law

3 credit(s) At least 1x fall or spring
This course focuses on the lawyer's role as a problem-solver. A series of problems challenge students to determine client interests and consider different courses of action for effective representation. The problems span more than one area of law and become more complicated as the semester progresses. To develop skills of perception and judgment, the course also incorporates the study of mindfulness and
emotional intelligence.

LAW 647 - Professional Responsibility: Becoming a Lawyer  
College of Law  
3 credit(s) At least 1x fall or spring  
This course will cover the essential components of professional responsibility and will focus on professional identity formation. Utilizing a problem approach that lends itself to simulations and skills development, students will learn how to analyze ethical issues; develop basic interviewing, counseling, and informal advocacy skills; practice collaboration; and reflect on the role of the lawyer and their own professional development. This course meets the Professional Responsibility requirement.

LAW 648 - Public Interest Lawyering  
College of Law  
3 credit(s) At least 1x fall or spring  
This course will explore major lawyering themes and skills used by public interest lawyers, cutting across diverse practice areas and settings. The course is designed to integrate academic theory with experiential learning (through role plays, simulations, and individual and group exercises) related to current issues affecting public interest law advocacy today.

LAW 690 - Legal Communications & Research III  
College of Law  
2 credit(s) Every semester  
A variety of courses that build on the skills learned in the first two semesters of the Legal Communication and Research Program. The courses focus more specifically on practice areas (such as civil litigation, criminal litigation, and transactional drafting) as well as courses that focus on legal writing (such as theories and strategies in persuasive writing and revising and editing legal prose).  
PREREQ: LAW 609

LAW 699 - Constitutional Law II  
College of Law  
3 credit(s) At least 1x fall or spring  
A continuation of Constitutional Law I (LAW 602) for second-year law students. Must be taken during the second year. This course covers Individual Rights, that is, Due Process, Equal Protection and the First Amendment, including freedom of speech, the press and religion.  
PREREQ: LAW 602

LAW 700 - National Security Law  
College of Law  
3 credit(s) At least 1x fall or spring  
Obtaining information about the government; restraints on publication; government surveillance; travel restrictions; war and emergency powers; nuclear weapons issues; civil disobedience and draft issues.

LAW 701 - Accounting for Lawyers  
College of Law  
2 credit(s) Irregularly  
Principles of financial accounting applied to business entities: proprietorships, partnerships, and corporations; accounting for and tax implications of business organizations; and problems with estates and trusts. Not open to students who have more than one year of accounting.

LAW 702 - Administrative Law  
College of Law  
3 credit(s) At least 1x fall or spring  
Nature and function of the administrative process. Procedural constraints on administrative investigation, adjudication, and rule making; judicial review of agency action.

LAW 703 - Pension and Employee Benefit Law  
College of Law  
2 credit(s) Irregularly  
Tax and other consequences of various plans of deferred compensation for executives and other employees.

LAW 704 - Commercial Transactions  
College of Law  
4 credit(s) At least 1x fall or spring  
Commercial practices under the Uniform Commercial Code, particularly sales, commercial paper and bank collections, letters of credit, bulk transfers, and secured transactions; business background, planning, and counseling.

LAW 705 - Comparative Law  
College of Law  
3 credit(s) Irregularly  
This course will provide a comprehensive introduction to the legal systems of the civil law, with a focus on continental Europe. Many characteristic features of the Civil Law -- the absence of a jury, the relative lack of reliance on judicial precedents, the emphasis on codification -- have their origin in ancient and medieval times. Our course will therefore trace a historical review of European legal history and the civil law, beginning with Roman law, proceeding through medieval times and the early modern era of the 18th and 19th centuries, to the modern period of international law. We will focus on the emergence of the three most influential modern systems, those of France, Germany, and Italy. We will examine the civil codes, the nature of continental adjudication, the inquisitorial approach to criminal justice, and comparative constitutional law. We will conclude the course by addressing the rise of the European Union and its legal institutions.

LAW 706 - Conflict of Laws  
College of Law  
3 credit(s) Irregularly  
Legal rules applicable to disputes with contacts to more than one state or country; the historical development of such rules; and their application in contract, tort, property, and other cases.

LAW 708 - Constitutional Criminal Procedure - Investigative  
College of Law  
3 credit(s) At least 1x fall or spring  
Constitutional and statutory requirement for investigative procedures in criminal cases. Topics include searches, seizures, lineups, confessions, and electronic surveillances.

LAW 711 - Land Use and Zoning Law  
College of Law  
3 credit(s) Irregularly  
This course will involve an examination of basic land use and zoning laws. Attention is paid to a variety of zoning and regulatory tools as well as to local laws addressing environmental concerns. This includes basic zoning, density controls, variances, exceptions, special uses, exactions, inclusionary and exclusionary zoning, and the takings issue. The focus of the course will be on the importance of private property rights and the protection of those rights in the context of public controls and regulations. The course will examine the way in which public and private claims to land are resolved through a mix of market and non-market mechanisms.

LAW 712 - Business Associations  
College of Law  
4 credit(s) At least 1x fall or spring  
This is a business organizations course covering both unincorporated businesses and corporations. The first half of the course pertains to small business forms: partnerships; LLCs and close corporations. The balance covers public corporations, including regulation under securities laws.

LAW 715 - Wills and Trusts  
College of Law  
3 credit(s) At least 1x fall or spring  
Law governing interstate succession; execution, and revocation of wills; inter vivos will substitutes; the creation, nature, and revocation of trusts.

LAW 716 - Environmental Law  
College of Law  
3 credit(s) Irregularly  
Pollution control and toxic substance regulation; the ends and means of environmental protection; the institutional responsibilities of legislatures, agencies, and courts. This course devotes substantial time to statutory interpretation and some time to covering administrative law, including agency rulemaking and judicial review of agency
LAW 717 - Estate & Gift Taxation  
College of Law  
3-4 credit(s) At least 1x fall or spring  
Taxation of transfers during life and at death. Planning and alternative modes of disposition.

LAW 718 - Evidence  
College of Law  
4 credit(s) At least 1x fall or spring  

LAW 719 - Law and Psychology  
College of Law  
3 credit(s) Irregularly  
An important goal of the legal system is to guide, constrain, and react to human behavior. In doing so, the law makes numerous assumptions about people’s thoughts, beliefs, attitudes, and conduct-assumptions that may or may not be true. Psychology, as the empirical study of human thoughts, beliefs, attitudes and conduct, is an important position to evaluate such assumptions. Over the past several decades, increasing numbers of social scientists have devoted substantial attention to the systematic study of law and legal institutions. At the same time, social scientists are testifying as experts in increasing numbers, and encouraging courts and policy-makers to use research evidence in adjudicating court cases and in setting public policy. This course will provide a survey of research in psychology as it relates to the legal and political process; in-class activities and demonstrations will form a significant part of the class. Among the topics covered may be jury decision-making, the insanity defense, paternalism, media violence, negotiation, race, trial consulting, obscenity and pornography, and capital punishment. Each topic will be considered from both a theoretical and an applied perspective.

LAW 720 - Family Law  
College of Law  
3 credit(s) At least 1x fall or spring  
State regulation of family relations. Family autonomy, marital and nonmarital contracts, adoption, Issues in divorce: separation agreements, spousal and child support, property division, and child custody.

LAW 721 - Federal Courts  
College of Law  
3 credit(s) At least 1x fall or spring  
Essential functions of federal courts. Relationships between federal courts and the other branches of the federal government, the states, and the individual.

LAW 722 - Federal Income Tax I: Individual Tax  
College of Law  
3-4 credit(s) At least 1x fall or spring  
A study of the structure and underlying principles of the U.S. Federal income tax system, including an introduction to tax planning. This course devotes substantial class time to the fundamentals of statutory interpretation, including: agency adjudications, judicial review of agency action, statutory interpretation techniques, methodologies, and legislative history.

LAW 723 - Federal Income Tax II: Taxation of Business Transactions  
College of Law  
3 credit(s) Irregularly  
Income tax problems of the corporation and its shareholders, emphasizing corporate organization, distributions, reorganizations, liquidations, reorganizations, collapsible corporations, and S corporations.

PREREQ: LAW 722

LAW 726 - Intellectual Property  
College of Law  
3 credit(s) At least 1x fall or spring  
Survey of the foundations of copyright, patent, unfair competition, and trade law. For students who wish to concentrate in intellectual property or who want a basic course as preparation for business planning or litigation practice.

LAW 727 - International Business Transactions  
College of Law  
3 credit(s) Irregularly  
This course provides an introduction to the transactional, regulatory, and litigation aspects of international business involving at least one private party. Major areas of substantive coverage include international sales of goods (with special focus on the United Nations Convention on the International Sale of Goods), licensing of technology, foreign direct investment, contract and tort liability in the United States and abroad, and the law prescribing corruption in cross-border transactions. We will also cover subsidiary litigation and regulatory topics, such as choice-of-law analysis, international commercial arbitration, international civil litigation in U.S. courts (focusing on jurisdiction and other procedural threshold issues), U.S. regulation of foreign investment and export controls, and intellectual property protection.

LAW 728 - International Law  
College of Law  
3 credit(s) At least 1x fall or spring  
This course introduces students to the basic subjects, processes, and problems of contemporary public international law. We begin by exploring the sources of public international law; the traditional role of states in international law formation; and the burgeoning role of international organizations, nongovernmental organizations, and subnational municipalities in transnational legal processes. Our attention then turns to the relationship between international law and U.S. law, including the principles that govern (and impede) the application of international law in U.S. courts. Rather than attempt to canvass the myriad subfields that comprise contemporary public international law, we devote sustained attention to four subjects: principles of jurisdiction, state claims to natural resources, the law of war, and international human rights. With this foundation in place, the course concludes with an invitation to grapple with several perennial critiques of the international legal system.

LAW 730 - Labor and Employment Law  
College of Law  
2-3 credit(s) Irregularly  
Organization and representation of employees, union collective action; collective bargaining, including the administration and enforcement of collective agreements.

LAW 735 - Federal Criminal Law  
College of Law  
3 credit(s) Irregularly  

LAW 736 - The Law and Literature  
College of Law  
3 credit(s) Irregularly  
The focus of this course/seminar will be the law, the legal process, and concepts of justice as they are treated in a number of works of fiction as well as by lawyers in judicial opinions and other writings. The fictional readings will be short stories (Tolstoy, Faulkner, Glaspeil, Hawthorne, Cather, de Maupassant, Vonnegut, etc.) and two novellas. In-depth consideration of the materials should demonstrate to the student the wide gamut of emotions, human relationships, and ambiguities with which case law frequently does not adequately deal. The materials raise issues of morality, natural law, divine law, mercy, the limits of advocacy, and ethics all of which must deeply concern any lawyer who wishes to strive to fulfill the true object of his or her profession.

LAW 738 - Communications Law  
College of Law  
3 credit(s) Irregularly  
Examination of the market structure and regulation...
of the communications industry as well as the relationship between the communications industry and the several branches of government. Topics include the authority of state and federal government to license spectrum and to regulate broadcast communications and cable, satellite, wireline and wireless services. Other topics may include broadcast fairness, political broadcasting and regulation of the Internet and emerging technologies.

**LAW 742 - Entertainment Law**  
*College of Law*  
3 credit(s) Irregularly  
Will simulate actual entertainment law practice and will emphasize the process by which contracts are developed and entered into as to make use of copyrighted properties. The student will be required to draw upon and further develop multiple legal skills, particularly substantive analysis, drafting, analysis of and otherwise dealing with “paper” from the other side, practical research, formulation of advice, and participation in various kinds of oral discussions.

**LAW 743 - New York Civil Practice**  
*College of Law*  
3 credit(s) At least 1x fall or spring  
Civil practice law and rules and interpretive cases and other aspects of civil litigation in New York.

**LAW 746 - Professional Responsibility**  
*College of Law*  
3 credit(s) Every semester  
Relationship of the lawyer to the profession, community, client, and society. ABA Code of Professional Responsibility, ABA Model Rules of Professional Conduct, and American Lawyer’s Code of Conduct.

**LAW 747 - Real Estate Transactions**  
*College of Law*  
3 credit(s) At least 1x fall or spring  
Standard residential and commercial real estate transactions, including consideration of brokerage arrangements, contracts of sale, methods of financing, methods of title protection, mortgage markets, construction loans, and permanent financing.

**LAW 748 - Sports Law**  
*College of Law*  
3 credit(s) Irregularly  
This course will examine various areas of the law as they relate to sports (both professional sports and intercollegiate sports), including such areas as contract law, antitrust law, labor law, law regulating player agents, gender discrimination law, and personal injury law.

**LAW 749 - Religious Faith, Secular Nationalism, and the Practice of Law**  
*College of Law*  
2 credit(s) Irregularly  
This course will explore the relationship between an individual’s religious beliefs and the practice of law, and will be centered around the important and growing body of literature of the religious lawyering movement. Initially, the course will take up the fundamental question of whether one can be religious and be a lawyer. In this context, the course will explore the extent to which a secular disposition about law, for example, that law is America’s civil religion or an expression of American nationalism precludes a space for faith in the practice of law. Subsequently, the course will examine how religious beliefs might be integrated into the practice of law, and what practicing as a religious lawyer might look like.

**LAW 750 - Securities Regulations**  
*College of Law*  
3 credit(s) Irregularly  
Securities Act of 1933: regulation of the distribution of securities, including the registration process, exempt securities, exempt transactions, enforcement, and liabilities. Securities Exchange Act of 1934: regulation of trading in securities and related market activities, including tender offers proxy solicitations, market manipulation, disclosure requirements, insider trading, and express and implied civil liabilities.

**LAW 753 - Legal Interviewing**  
*College of Law*  
2 credit(s) Irregularly  
This course will combine the theory and practice of legal interviewing. The substantive and theoretical framework for legal interviewing will be examined and then applied in practice. Practical applications will include both simulations and at least two live interviews of real clients with real-time, real-life legal problems.

**LAW 754 - Trial Practice**  
*College of Law*  
3 credit(s) Every semester  
Courtroom techniques and tactics drawing on substantive and procedural law and evidence courses. Students prepare and conduct trial exercises under direction of instructor. Repeatable

**LAW 755 - Trademarks and Unfair Competition**  
*College of Law*  
3 credit(s) Irregularly  
A practical review of current intellectual property issues relating to trademarks, trade dress, false advertising, internet and the First Amendment, and rights of publicity. The course features mock courtroom presentations by experienced litigators and guest presentations by practitioners in the field.

**LAW 756 - Lawyering Skills**  
*College of Law*  
3 credit(s) At least 1x fall or spring  
Lawyering Skills - Basic: The course covers the practical lawyering skills essential for the successful and effective representation of clients in various areas of the law, including criminal law, corporate, real property and zoning, estates and trusts, litigation, appellate practice, and other area of practice. When discussing those areas of law, special emphasis will be placed on client interviews, ethical issues, negotiation techniques, counseling skills, drafting documents, making presentations, persuasive writing, decision-making, and, most importantly; critical and strategic thinking. By doing so, the course should condense and weave together a broad range of experiences and exercises which the students may encounter in the actual practice of law. Lawyering Skills - Planning for the Non-Traditional Family: Crafting of legal instruments for individuals and their loved ones who do not fit the traditional nuclear family model. Topics would include domestic partnership agreements, estate planning instruments (e.g. wills, trusts, and corporate formations), tax planning, and second-parent adoptions.

**LAW 759 - Computer Crimes**  
*College of Law*  
3 credit(s) Irregularly  
This course is organized around three questions: 1) what conduct involving a computer is prohibited by criminal law? 2) What legal rules govern the collection of digital evidence in criminal investigations? 3) What powers do state, national, and foreign governments have to investigate and prosecute computer crimes? More specifically, topics will include computer hacking, computer viruses, encryption, online undercover operations, the Fourth Amendment in cyberspace, the law of Internet surveillance, laws governing access to e-mail, forum-shopping, jurisdiction, national security, and federal & state relations and international cooperation in the enforcement of computer crime laws. Special attention will be paid to cyber terrorism. No advanced knowledge of computers and the Internet is required or assumed.

**LAW 760 - Patent Prosecution**  
*College of Law*  
3 credit(s) Irregularly  
This course is designed primarily for students who plan to practice in the area of Patent Law before the U.S. Patent and Trademark Office (PTO) which permits only registered patent attorneys and agents to represent clients in the prosecution of patent applications. The course will cover the process of procuring a patent from the U.S. Patent and Trademark Office. The course will also enhance students’ understanding of the legal standards for patentability (building upon the principles explored in Patents and Trade Secrets), will familiarize students with the PTO’s elaborate rules of practice in patent cases, and will provide students with practice applying these standards and rules to facts and situations encountered in basic patent prosecution practice.  
PREREQ: LAW 765
The course examines the U.S. patent system and focuses on issues of patentability, validity, and statutory interpretation, including statutory interpretation techniques and methodologies, canons of statutory interpretation, and the role of legislative history in statutory interpretation.

LAW 764 - Bankruptcy Law: Creditors Rights and Debtors Protection
College of Law
3 credit(s) Irregularly
This course will cover state law remedies (how to collect a judgment), the rights of secured and unsecured creditors under state law and in bankruptcy, and the protections available to individuals and businesses in bankruptcy. The course will devote substantive class time to covering the fundamentals of statutory interpretation, including statutory interpretation techniques and methodologies, canons of statutory interpretation, and the role of legislative history in statutory interpretation.

LAW 765 - Patents and Trade Secrets
College of Law
3 credit(s) Irregularly
This course examines the U.S. patent system and focuses on issues of patentability, validity, and infringement. The protection and enforcement of trade secrets are also covered.

LAW 766 - Copyright-Literary and Artistic Works
College of Law
3 credit(s) Irregularly
Advanced copyright course. In-depth exploration of a number of copyright law areas in music, fine arts, and film; issues on the boundaries of copyright law. Includes fair use, work for hire in both industry and academia, compensation for ideas, moral rights, right of publicity, the impact of new technologies on research, data bases and fact-based works, infringement on unpublished works, and international copyright protection.
PREREQ: LAW 726 OR LAW 742

LAW 769 - Trial Practice-Advanced
College of Law
2 credit(s) Every semester
Advanced training in direct and cross-examination, witness interviewing and preparation, negotiation techniques, voir dire and jury preparation, final arguments, discovery, pretrial and trial motions, pretrial conferences, jury trial techniques, posttrial procedure.
PREREQ: LAW 754

LAW 770 - Corporate Compliance Law
College of Law
3 credit(s) Irregularly
This course examines the rules and standards that govern the burgeoning subject of compliance and risk management. It will examine questions of governance: boards of directors, executives and third party vendors. It will examine the compliance function, organized by the nature of the enforcer: managers, regulators, prosecutors, whistleblowers, gatekeeper and plaintiffs; attorneys. It will also examine particular areas of law: information security, off-label drugs, foreign corrupt practices, money laundering, sexual harassment, etc.

LAW 771 - Alternative Dispute Resolutions
College of Law
3 credit(s) Irregularly
An introduction to the spectrum of processes other than courtroom litigation that are available for resolving disputes. This includes such "pure" processes as negotiation, mediation, and arbitration, and such "hybrid" processes as the Mini-Trial and the Summary Jury Trial.

LAW 772 - Internet Law
College of Law
3 credit(s) Irregularly
A survey of legal issues relating to computers networks, including electronic commerce, the protection and enforcement of proprietary rights in software and electronic works, privacy and security, and content regulation. This course also explores the evidentiary use of computer records and other emerging issues in computer law.

LAW 773 - Elder Law
College of Law
3 credit(s) Irregularly
This course will address ethical issues related to the competency assessment of elder clients. Income maintenance, including Social Security, Supplemental Security Income, and other public and private pensions as well as Medicare and Medicaid will be considered. Guardianship, long-term care, and estate planning will be considered as well. Additional topics may include employment discrimination, housing, health care decision making, and elder abuse.

LAW 774 - Employment Law
College of Law
3 credit(s) Irregularly
This course will cover a wide variety of topics in the employment relationship. It is a complex area covered by both federal and state statutes as well as common law. Topics that will be covered include establishing the employment relationship, terms and conditions of employment, health insurance and other fringe benefits, the work environment, and terminating the employment relationship. This course may include an experiential component consisting of the opportunity to represent a client in an unemployment insurance board hearing.

LAW 775 - International Human Rights
College of Law
3 credit(s) Irregularly
After introducing human rights law in the context of a case study on the death penalty, this course examines international human rights law from both a practical and theoretical perspective. The course is designed to provide students with an informed and critical perspective on international instruments, intergovernmental organizations, and domestic legal arrangements articulating and implementing human rights. Topics will include the historic origins of modern human rights law; the content of and connections between civil, political, social, and economic rights; relationships between human rights law, international criminal law, and the law of armed conflict; transnational strategies associated with implementation and enforcement of human rights law; the importance of soft law; and international responses to mass atrocities.

LAW 776 - Law and Popular Culture
College of Law
2-3 credit(s) Irregularly
Law is everywhere around us, and the most unlikely of places are the best subjects to examine. Even in contexts outside the obviously legal, law manifests, constantly updating itself. If traditional legal education and other formal legal representations represent the "high culture" of law, what is deemed popular culture, that which is modern, material, and local--unashamedly represents the "low." This class examines the dissemination of legal information to the masses and the concomitant effect of the masses upon the law. By examining film, literature, art, and music, students will learn the dialectical influences of law and humanity, and how this is translated into various media.

LAW 777 - Adoption Law
College of Law
3 credit(s) Irregularly
This course will explore the substantive laws of products liability, medical malpractice, workplace
injuries, defamation, and invasions of privacy; through use case studies will develop action plans, draft pleadings, and other mechanisms used in tort litigation.

LAW 787 - Children and the Law
College of Law
3 credit(s) Irregularly

Parent-child, child-state relationships. Education, health, welfare, child abuse, juvenile delinquency, and representation of children will be covered in this course.

LAW 788 - Immigration Law
College of Law
3 credit(s) Irregularly

This course offers an introduction to the laws, practices, and policies governing the ability of non-U.S. citizens to enter and remain in the United States either temporarily or permanently. The topics of study include the rights of non-U.S. citizens, the bases upon which the United States admits non-U.S. citizens either temporarily or permanently and the procedures for admission, the bases upon which non-U.S. citizens may be removed from the U.S. and the procedures for removal, the principles and policies behind the current and past system of immigration law, the complex and intricate statutory and regulatory framework governing immigration, and the roles and powers of the different branches of government in the development and implementation of immigration law and policy. The material in this course will implicate and develop your understanding of other areas of law, including administrative law, international law, and constitutional law.

LAW 790 - Counterterrorism and the Law
College of Law
3 credit(s) Irregularly

This course will concern U.S. and international law responses to terrorism. The course will include a brief overview and history of terrorism. Topics will include legal definitions of terrorism, investigation and intelligence collection in the U.S. and abroad, apprehension of terrorists across borders, immigration and border controls, prosecution of terrorists, sanctions against terrorism and its supporters (including reprisal, assassination, asset freeze and forfeiture), crisis and consequence management in the event of terrorist attacks (including martial law and detention, domestic use of the military, catastrophic emergency measures, hostage and rescue operations), and law reform issues.

LAW 791 - International Commercial Arbitration
College of Law
3 credit(s) Irregularly

As a private form of dispute resolution that bypasses the jurisdiction of national courts, international commercial arbitration is the principal method of resolving cross-border disputes between individuals, companies, and countries in connection with international trade and investment. The course will discuss the domestic, international, and comparative aspects of the arbitration agreement (score and validity), the devices to compel parties to arbitrate (enforcement of the agreement), the role of arbitrators, the role of the courts, the arbitration process, and the enforcement of the award.

LAW 794 - Regulatory Law & Policy
College of Law
3 credit(s) At least 1x fall or spring

An advanced exploration of regulatory decision making, focusing on the reasons for and methods used in implementing regulation; how policy and politics impact on regulatory decisions and relate to the legal authority of agencies; case studies of regulatory programs, their successes and failures. Course requirements include one or more research papers which will meet the College of Law writing requirement. Administrative Law or Public Administration and Law are prerequisites for this course. This one-semester course is a J.D./M.P.A. program requirement.

PREREQ: LAW 702

LAW 796 - Constitutional Criminal Procedure - Adjudicative
College of Law
3 credit(s) At least 1x fall or spring

Constitutional and statutory requirements for adjudicative procedures in criminal cases. Topics include accusatory instruments, bail, discovery, guilty pleas, double jeopardy, speedy trial, fair trial, jury trial, assistance of counsel, and confrontation.

LAW 800 - Foundational Skills for Attorney Licensing
College of Law
2-3 credit(s) At least 1x fall or spring

The course will provide an understanding of the bar review and bar exam process as well as the skills necessary to be successful in the licensing process. A significant portion of the course will be spent discussing how to approach and do well on practice bar exam questions, including essays, performance tests and multiple choice questions. Time will be spent discussing how to learn from bar review outlines and lectures, and how to conduct a self-assessment to understand personal study habits and adjustments which must be made prior to the review of bar-tested subjects. The course will also cover specific topics and skills to help students understand how to manage their attitude, stress, and study time.

LAW 803 - Law Practice Management
College of Law
2-3 credit(s) Irregularly

Law Practice Management comprehensively examines all aspects of the formation, management, development and growth of a law firm. The course will focus primarily on solo practitioners and small partnerships. The course will explore forms of partnership, licensing requirements, insurance, human resources and employment practices, accounting and finance, information technology, marketing and business development, and dissolution.

LAW 806 - Legal Interviewing and Counseling
College of Law
3 credit(s) Irregularly

Legal Interviewing and Counseling is a course that will introduce students to the theory and practice of legal interviewing and counseling and the skills necessary to conduct interviews and provide counseling to clients. Classes will involve a combination of interaction discussion and interviewing and counseling sessions. In addition, students will be assigned one interviewing and one counseling demonstration to present in class that will include written submissions.

LAW 809 - Advanced Disability Law and Policy
College of Law
3 credit(s) Irregularly

This is a one-semester applied learning course. The goal of this course is to expose students to disability law and policy as applied to real situations. Each student will work on a project that has originated from a request from a “real client” or client organizations, such as the National Council on Disability, the World Bank, Mental Disability Rights International, or other organizations that work with and for people with disabilities.

LAW 811 - General Counsel
College of Law
3 credit(s) Irregularly

This applied learning course is designed to expose students to a number of areas of practice that are common for house counsel. Students will work individually and in teams and undertake simulations in litigation management, agreement negotiation and drafting, employment problems, and intellectual property practice. Students will learn how lawyers handle complex problems in such diverse areas and may conduct research, draft agreements and file memoranda, conduct interviews, and negotiate to resolve the issues found in the practical exercises that will be the backbone of the course.

LAW 812 - Legal Counseling
College of Law
2 credit(s) Irregularly

Legal Counseling will introduce students to the skills necessary to provide counseling to clients. Classes will involve a combination of interactive discussion and counseling simulation exercises. The class will cover identifying clients’ legal needs and objectives, and then assisting clients in evaluating options, weighing consequences, and decision-making.
LAW 813 - The Rule of Law in Post Conflict Reconstruction Seminar  
*College of Law*  
3 credit(s) Irregularly  
This course addresses the legal challenges faced by the international community in reconstructing societies following armed conflict or other crises. The course is divided into two sections. Part one focuses on a number of core issues, including defining and identifying the rule of law; the relationship between the law and reconstruction; the question of transitional justice and international criminal law; international human rights; protecting vulnerable populations; and regulating the security sector. In the second part, the focus moves to case studies, South Africa, Rwanda, Haiti, Sierra Leone, Afghanistan and East Timor to test some of the theoretical premises as well as stimulate debate.

LAW 814 - Technology Transactions Law  
*College of Law*  
3 credit(s) At least 1x fall or spring  
This course provides students with an in-depth understanding of the technical, business, and legal factors involved in bringing new technologies to market. This course covers topics ranging from basic intellectual property law and performing patent searches to economics to finance and business areas such as financing technology innovation. The course includes multiple guest lectures from practicing professionals involved in technology transactions at universities as well as private companies and in law firms. At the conclusion of the course, students will have a broad knowledge of technology innovation law and practice.  
Repeatable

LAW 815 - Technology Commercialization Research Center  
*College of Law*  
3 credit(s) At least 1x fall or spring  
This applied learning course allows students interested in the areas of intellectual property and business law to apply their knowledge to actual new technology projects. In this year-long course, students work in teams consulting with companies, entrepreneurs or universities that are seeking to commercialize new technologies. The finished product includes a report and presentation that cover such things as: analyzing the technology, investigating intellectual property protection, examining the market landscape, identifying any regulatory concerns, and exploring opportunities for funding or licensing. Technology Transactions Law is a prerequisite for this course but may be taken concurrently.

LAW 816 - Commercial Real Estate Practice  
*College of Law*  
2 credit(s) Irregularly  
This applied learning course will build on the fundamentals of the Real Estate Transactions course and will focus on the development of a regional shopping mall which will provide a framework for the course outline. The course will not only provide ways to convey many of the concepts found in this type of real estate, but will also provide the basis to explore the relationship between the real estate concepts and the business framework of which they become a part. Case law will be utilized to supplement certain interpretations of Real Property Law.  
PREREQ: LAW 747

LAW 817 - Military Law and Procedure Seminar  
*College of Law*  
2 credit(s) Irregularly  
Military Law and Procedure is an overview of the military justice system and its procedural application in today's Armed Forces of the United States. Students will read, discuss, and practice how the Uniform Code of Military Justice and its procedural applications ensure proper discipline within the ranks of today's armed forces. The course will trace the history of discipline within those armed forces, the development of the rule of law in the military, the practice aspects of advocating before a courts-martial, as well as understand the non-judicial and administrative aspects of discipline in the Army, Navy, Air Force, and Marines. Additionally, the students will study the application of the UCMJ on the battlefields of Iraq and Afghanistan, as well as the new challenges faced by commanders and their legal advisers in the battlefields of tomorrow.

LAW 818 - Technology Commercialization Seminar  
*College of Law*  
2 credit(s) Irregularly  
This course allows students to work in teams consulting with companies, entrepreneurs or universities that are seeking to commercialize new technologies. The finished product includes a report and presentation that cover such things as: analyzing the technology, investigating intellectual property protection, examining the market landscape, identifying any regulatory concerns, and exploring opportunities for funding or licensing. Technology Transactions Law is a prerequisite for this course but may be taken concurrently.

LAW 819 - Family Law Mediation and Collaborative Law  
*College of Law*  
3 credit(s) Irregularly  
This course will focus on alternative dispute resolution in the family law area. Students will study mediation and collaborative law through written materials and mock exercises. The ethical issues involved in these forms of ADR will also be addressed.

LAW 820 - National Security & Counter Terrorism Research Center  
*College of Law*  
3 credit(s) Irregularly  
The National Security and Counterterrorism Research Center serves as a working research laboratory for law and other graduate students interested in national security and counterterrorism issues. Students will work in teams on research projects assigned by the director. Typically, the projects will involve assessments of legal and law-related issues of concern to federal, state, and local government officials in responding to national security and terrorism threats. Other projects may examine private sector security concerns.  
COREQ: LAW 700 AND LAW 790

LAW 821 - Commercial Real Estate Practice  
*College of Law*  
2 credit(s) Irregularly  
This applied learning course will build on the fundamentals of the Real Estate Transactions course and will focus on the development of a regional shopping mall which will provide a framework for the course outline. The course will not only provide ways to convey many of the concepts found in this type of real estate, but will also provide the basis to explore the relationship between the real estate concepts and the business framework of which they become a part. Case law will be utilized to supplement certain interpretations of Real Property Law.  
PREREQ: LAW 747

LAW 822 - Corporate Financing Transactions  
*College of Law*  
1.5-2 credit(s) Irregularly  
This course combines diverse aspects of business and law education in a transaction-based setting. It guides students through a syndicated commercial loan, including the structuring, negotiation, pricing, and documentation.  
COREQ: LAW 712

LAW 823 - Advanced Criminal Evidence  
*College of Law*  
3 credit(s) Irregularly  
The course will cover Federal and New York rules of evidence, and constitutional rules pertaining to the rights to confront and present a defense, in connection with a range of issues typically arising in criminal cases. Weekly assignments will be designed to simulate work that would be performed in a prosecutor's or defender's office. They will include motions in limine and supporting memoranda, inter-office trial preparation memoranda, and both trial court and appellate advocacy of evidentiary issues. The course is a limited enrollment course and the grade will be based exclusively on written and oral advocacy.  
PREREQ: LAW 718

LAW 831 - Refugee and Asylum Law  
*College of Law*  
3 credit(s) Irregularly  
The 1951 Refugee Convention relating to the Status of Refugees is over 60 years old. The number of people forcibly uprooted by conflict and persecution stands at over 40 million and is unlikely to diminish. Against this background, international debates continue regarding the nature of the protection that refugees should be granted, the role of the international community, and the obligations of receiving countries towards refugees. This course aims to introduce students, through comparative legal studies, to how the 1951 Refugee Convention has developed.  
The module covers the international legal framework for refugee protection, its main challenges and shortcomings, by referring to how international, regional, and national courts interpret and implement refugee and asylum law. Main areas of discussion will include international criteria for the attainment, exclusion and withdrawal of refugee status, the development of the non-refoulement principle, and the changing role of UNHCR, as well as how the EU, the AU and OAS employ the term refugee while also noting how states react to those decisions.  
PREREQ: LAW 712

LAW 832 - Cyber Security Law and Policy  
*College of Law*  
3 credit(s) Irregularly  
The 2009 White House Cyberspace Policy Review states: The United States needs to conduct a national dialogue on cybersecurity to ensure an integrated approach toward the Nation’s need
for security and the national commitment to privacy rights and civil liberties guaranteed by the Constitution and law. This three-credit, one-semester seminar intends to be part of that dialog. Some cyber security law already exists. Other laws of long standing present issues of applicability or adaptability to the cyber realm. Many proposals remain in Congressional committees, such as bills that would mandate security measures for all entities receiving federal money, establish a federal certification for technicians serving computer networks of entities receiving federal money, and provide the President with authority to “pull the plug” on national Internet connectivity in times of emergency. This course is premised on the belief that much policy and law to implement it will be made in the next few years to institute a national policy to protect U.S. interests in cyberspace. The seminar uses an interdisciplinary approach, but no special background or prerequisites are required.

LAW 834 - Social Deviance and the Law
College of Law
3 credit(s) Irregularly
Deviant behavior characterizes a course of action that violates recognized social norms. First, formal social norms govern human behavior through legal institutions. Conversely, informal social norms gather energy through no concrete regulatory structure, but through social approbation. This course focuses on both types of norms. Students will explore informal norms as an alternative way of thinking about power and governance outside the provenance of law. They will develop critical thinking skills about the authority of manners and society as equally forceful, or perhaps even more so, than formalized law. This interdisciplinary course brings together law, literature, philosophy, and film. Topics covered will be: Manners, Propriety, Violence, Sexuality, Blue laws, and Intercultural competence.

LAW 835 - Violence Against Women Act
College of Law
3 credit(s) Irregularly
The Violence Against Women Act course will review the original authorization of the 1994 legislation and key aspects of subsequent re-authorizations that reformed how partner violence and rape cases are handled in the criminal and civil justice system. Key federal and state court cases will also be reviewed. An examination of the canons of statutory interpretation, statutory interpretation and methodologies and legislative history will also be addressed.

LAW 836 - Class Actions:Complex Litigation
College of Law
3 credit(s) Irregularly
Class action is the most controversial procedural device. After studying the technical issues (prerequisites, certification, notice, opt out, settlement, res judicata) and its specific applications (consumer, antitrust, security, discrimination, mass tort) in concrete cases (tobacco, asbestos, Wal-Mart), you will be able to better understand the political and social implications behind class actions. Although class actions may bring social change and right injustices, it may also be improperly used to harass and blackmail defendants into settling non-meritorious claims. The course also deals with non-class aggregation, like joinder, impleader, intervention, consolidation, transfers, and bankruptcy. It is also an excellent opportunity to review civil procedure concepts.

LAW 838 - Capitalism, Property Rights, and Binary Economics
College of Law
1-2 credit(s) Irregularly
One of the most important duties of lawyers is to help people identify and secure their essential rights and responsibilities. Serving clients effectively requires that lawyers ask the right questions. When addressing economic rights, here are nine important questions: (1) Why does wealth tend to concentrate in market economies even in times of great prosperity? (2) Why does the great promise of the industrial revolution (abundance and leisure) remain unfulfilled for most people? (3) Why does every generation of students graduate deeper in debt? (4) What is behind the adage, it takes money to make money? (5) How can more economic opportunity become more broadly distributed? (6) What are the growth and distributive consequences of the fact that most capital is acquired with the earnings of capital? (7) Is there a practical, efficient way to enable all people to acquire capital with the earnings of capital, without taking anything from existing owners? (8) What is the relationship between the distribution of capital ownership and the functioning of a democracy? (9) What role can lawyers play in pursuing these and related questions to better serve their clients, themselves, and society? This seminar will explore these and related questions. The seminar will not require an above average mathematical aptitude or prior exposure to economics, but rather only an open mind and a willingness to approach economic issues from a foundation grounded in professional responsibility. Students will read assigned material, do additional reading of their own choosing, make an in-class presentation (optional), and write a paper that will satisfy the writing requirement for graduation.

LAW 839 - Law, Politics and the Media
College of Law
3 credit(s) Irregularly
The American judicial system today operates in a complex environment of legal principle, political pressure, and media coverage. The separate elements of this complex environment are typically studied by different groups of individuals working from different perspectives. Law faculty tend to focus on legal principle; political scientists examine the influence of politics; and scholars of public communication assess the media. The goal of this course is to introduce students to the court system and its environment as a single, integrated subject of study. To this end, the course is taught by a team of faculty instructors drawn from law, journalism, and political science. Academic discussions are complemented by lectures from sitting judges, practicing lawyers, and working journalists. Topics to be covered in the course include: conventional understandings of judicial independence; contemporary public opinion of the courts; the ethics of good judging and good journalism; the politics of judicial elections and judicial appointments; the possibilities for judicial reform; the politics of judicial budgets; the media, tort reform, and the litigation crisis; trials of the century; the media treatment of wrongful convictions and cold cases; and the relationship between press coverage, the courts, and national security.

LAW 840 - Laws of Armed Conflict Seminar
College of Law
2-3 credit(s) Irregularly
Mankind has attempted to regulate the horror of war for centuries. This seminar will review those attempts, focusing on the modern era. Particular attention will be paid to recent challenges related to the war on terror and the ramifications for future enforcement of these key principles. Any student interested in practicing national security law or going into international criminal justice must have a clear understanding of the law of armed conflict. This seminar will assist in that understanding. The student will have the opportunity to be involved in several practical exercises that will reinforce their learning and write a paper on various cutting edge issues, of their choosing, related to the law of armed conflict. Repeatable

LAW 846 - History of Regulation of Trade and Business
College of Law
2-3 credit(s) Irregularly
This course explores the legal and moral principles of business and trade regulation over 5,000 years, including: ancient regulation of prices, usury laws, licensing, and other concepts as they evolved into our current system.

LAW 847 - An Introduction to American Legal Thought
College of Law
2 credit(s) Irregularly
This course will explore a variety of contemporary schools of legal thought, with an emphasis on their understanding of the nature of law and, where applicable, the appropriate objectives of law and law reform. The course will begin with an overview of the historical roots of today's thinking, exploring Langdell's orthodoxy, Oliver Wendell Holmes reaction thereto, and the highly influential realists. The course will then turn to its more central focus: the legal process school and the contemporary progeny of legal realism (e.g., law and economics, critical legal studies, law and feminism). The course will also expose students to a powerful new alternative to these popular schools of thought, namely the cultural study of law.
LAW 852 - Affordable Care Act Seminar
College of Law
3 credit(s) Irregularly
This seminar explores four aspects of the Affordable Care Act also known as Obamacare. The first is the long history of advocacy for the federal government to declare health care a right and to provide public funding for all medical and hospital attention. The second will be a study of the contents of the ACA, attempting to understand how the legislation was conceived, written and passed. The third will be a study of the implementation of the law including the experience of the failed roll-out using the Internet. Finally, legal decisions arising from the law will be examined. This course can be used to fulfill the legal writing requirement.

LAW 857 - Jessup Mini-Course
College of Law
1-2 credit(s)
The Jessup mini-course is designed to prepare student for effective participation in the Jessup International Moot Court Competition. Classes will focus on general principles of international law, research skills, and discrete international law topics arising from the Philip C. Jessup International Law Competition problem set. All class participants must be members of the SUCOL Jessup International Moot Court Team as advocates, memorialist or alternate. Arguing members and the memorialist receive two (2) total credits for this class. Alternates receive one (1) credit for the course.

LAW 859 - Advanced Issues in Copyright Law
College of Law
1 credit(s) Irregularly

LAW 860 - Business Valuation Law
College of Law
3 credit(s) Irregularly
An understanding of the principles of valuation is essential to a wide array of legal practice areas ranging from corporate law to marital dissolution. This course will focus on the concepts and methodologies employed to evaluate privately held and publicly traded enterprises. The fundamental and market-based business valuation theories and techniques will be examined, including the capitalization of earnings method, the dividend discount model, the discounted cash flow method, the capital asset pricing model, and the efficient capital market hypothesis. Additional topics will include the applicability of minority and marketability discounts and the exclusivity of appraisal rights. Students will have the opportunity to analyze business valuation problems and discuss the implications of the various business valuation models.
COREQ: LAW 712
Repeatable

LAW 862 - Public Health Law Seminar
College of Law
3 credit(s) Irregularly
This course serves an introduction to elements of the international legal regime govern the exploration, extraction, exploitation, regulation and arbitration of natural resources in the developing world. Students will be required to submit a seminar term paper that would address on one of the aforementioned themes. The course begins with an introduction to public international law and principles applicable to energy and natural resource activities, including sovereignty over natural resources and sustainable development. Other resources include genetic resources, water, wood, fish and mammals are also briefly examined. The second section of the course focuses on international legal regulations of specific energy sector: oil and gas, nuclear, and renewable sectors. The unique features of the legal regimes that have merged is that they must address and support the trans-boundary aspect of natural resources, as seen with the construction of oil and gas pipelines. The third section examines question of rights and the environment exploring issues relating to duty of care in relation to the extraction of resources. This part includes case study of trans-boundary pipelines development to illustrate, inter alia, the complex interplay of human rights, energy and other factors, and to identify the actors involved (including international financial institutions such as the World Bank) and the remedies routes available to affected individuals and groups. This links to Part IV, the accountability of non-state actors such as multinational enterprises and institutions for environmental, human rights, and other consequences of their energy and natural resources activities. Examination of emerging best practice in mineral policy. Interfuse within the course is a policy-based review of the security aspect of natural resources, as these are susceptible piracy, hostage-taking and armed incursions, to security of supply in times of international emergency.

LAW 864 - Estate Planning
College of Law
3 credit(s) Irregularly
This course will explore estate planning from two perspectives. First, it will deal with the substantive aspects of estate and gift tax and property law (including joint interests, life insurance, and retirement plan proceeds) which must be considered in developing an estate plan. Wills, trusts, and other planning techniques will be considered in detail. Second, the practical aspects of dealing with estate planning clients will be considered in depth, including how to explain difficult technical matters to the client, how to present documents to clients in an understandable format, and issues of ethics and professionalism. Short drafting and writing exercises as well as a substantial paper, consisting of a package of client memoranda and documents, will be required.
COREQ: LAW 715 AND LAW 717
Repeatable

LAW 865 - International Energy Law & Policy
College of Law
3 credit(s) Irregularly
Rapid deployment of advanced communication and networked computer control is revolutionizing the electric power system. The "Smart Grid" as it is often referred to, is allowing greater decentralizations, potentially greater energy efficiency, and lower environmental impacts. The data being exchanged will be highly personal and granular, potentially compromising individual privacy and safety. If not done correctly,
This highly interdisciplinary, team-taught course covers the fundamental issues of the smart grid. It focuses on building the skills needed to design and test the protocols, policies, and specifications for enabling technologies that will guarantee the security and integrity of the grid while preserving personal privacy and providing maximum market flexibility with minimal need for new regulation. Students who complete the course will be able to integrate four perspectives - technology, security, economics, and law - allowing them to lead the development of the next generation electric grid. It focuses on building the skills needed to design and test the protocols, policies, and specifications for enabling technologies that will guarantee the security and integrity of the smart grid while preserving personal privacy and providing maximum market flexibility with minimal need for new regulation. Students who complete the course will be able to integrate four perspectives - technology, security, economics, and law - allowing them to lead the development of the next generation electric grid.

**LAW 871 - Foreign Relations**
*College of Law*

3 credit(s) Irregularly

This course examines history, doctrine, and policy involving U.S. engagements with foreign governments, organizations, and individuals. Our focus will be the complex development and negotiation of the diverse legal orders, subjects, and spheres of action implicated in contemporary foreign relations. By canvassing and critiquing foreign relations history, law, and policy, students will acquire the basic knowledge and skills required for analysis and argument within the field.

**LAW 872 - International Criminal/Civil Practice and Procedure Seminar**
*College of Law*

2 credit(s)

International Criminal/Civil Practice and Procedure prepares a student for the real world of practicing before international criminal courts and federal district courts related to human rights violations, as well as seeking redress before other world judicial bodies to include the International Court of Justice and the various regional human rights courts. This seminar will be an intensive study of case studies taking the student from initial allegations of war crimes or crimes against humanity, developing an investigative plan, drafting of indictments, preparing pre-trial motions, preparing for trial, and trial practice. Ancillary considerations related to civil suits before regional human rights courts and US federal district courts will be studies as well. The student written work product and presentations will form the basis of the grade at the end of the course.

**LAW 881 - Vietnam: A Disability Lens**
*College of Law*

1 credit(s) Irregularly

This course offers a comparative look at the laws, policies and practices vis-a-vis disability in Vietnam and the United States, coupled with an on-the-ground, close-up look in Vietnam. The course will introduce the students to the United Nations Convention on the Rights of Persons with Disabilities, Vietnam’s law on disability enacted in 2010, and federal laws specific to disability, namely the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the Individuals with Disabilities Education Act.

**LAW 883 - Central Challenges in National Security Law and Policy**
*College of Law*

3 credit(s) Irregularly

Using a series of case study modules that jump off the front page, the course examines critically the hardest U.S. national security law and policy challenges of the decades ahead. The case studies range from decisions to intervene and what laws apply if we intervene in humanitarian crises, insurrections, or civil wars, and what laws should govern when we are involved; dealing with the Arab Spring; dealing with Iran and North Korea related to nuclear weapons; anticipating and controlling new technologies in warfare and surveillance; managing civil/military relations in protecting the homeland; countering the cyber threats to our infrastructure and cyber attacks waged by nation states, such as China and Russia; managing public health as a national security issue; resource depletion and global warming as a national security issue. Students will learn to integrate legal and policy analyses, and will gain lessons in how policy is made and implemented with significant legal guidance. Students will present analyses of case studies to the class, and will write brief memoraand concerning some of the case study modules.

**COREQ: LAW 700**

**LAW 884 - Advanced Litigation Skills**
*College of Law*

3 credit(s) Irregularly

Trial work is a relatively modest fraction of a litigator’s life. Yet most law schools routinely offer trial advocacy courses, and largely ignore the other practical forms and occasions for litigation advocacy. This is a one-semester program where aspiring litigators would confront the more typical litigation problems that would combine and hone their training in legal writing and written advocacy, civil and criminal procedure, and privilege and other issues arising in the course of discovery, motion practice, negotiation and oral advocacy. This experiential course would accomplish this through a series of classroom simulations and written homework assignments that required the students to address a series of typical litigation problems.

**LAW 888 - Consumer Law**
*College of Law*

3 credit(s) Irregularly

An introduction to federal and state regulation of the consumer market including unfair and deceptive practices; consumer credit regulation including truth in lending, usury, and predatory finance; debt collection; warranties; credit reporting and identity theft. The course will explore the on-going changes brought on by the Dodd-Frank Act and how federal fee-shifting statutes create opportunities for entrepreneurial law graduates. Students will review and analyze consumer contracts and statutes; draft legal documents based on real world scenarios; and draft comments and other advocacy materials on regulatory and legislative proposals.
from a diverse range of backgrounds and does not have specific prerequisites.

**LAW 892 - Capital Punishment Seminar**  
*College of Law*  
3 credit(s) Irregularly  
The death penalty is society's ultimate legal sanction, meant to be reserved for the worst of the worst. Given the finality and enormity of the government's deliberate taking of a human life, the United States Supreme Court has developed a complex jurisprudence regulating the imposition of the death sentence. In this seminar, we will study this complex jurisprudence, and discuss the historical development of the death penalty. In addition, we will engage in a critical study of the institution of capital punishment, discussing topics such as the impact of capital crimes on victims' families, the theoretical rationales for capital punishment, the historical development of the death penalty, capital punishment in global law and practice, the impact of mental illness, race and poverty on how the death penalty is administered, and the sentencing of innocent persons to death.

**LAW 896 - Education Law**  
*College of Law*  
3 credit(s) Irregularly  
This seminar will introduce students to the issues surrounding the provision of public and private education and to enable students to develop understandings of educational delivery systems that will help them to address education-related issues in their legal practice. Topics will include federal and state roles in public education, use of public funds for private/parochial education, public school choice and school vouchers, special education, gender equity in education, affirmative action and diversity in higher education, and public school desegregation.

**LAW 899 - Atrocity Law and Policy: Practicing before International Criminal Tribunals**  
*College of Law*  
2 credit(s) Irregularly  
International criminal law is a new discipline within the legal profession. Over the past 12 years, the discipline has developed at an exponential rate. Cutting edge rulings and decisions are setting the cornerstones in international criminal law for years to come. It is a rare opportunity for teachers, students, practitioners, and policy makers to be present at the beginnings of a new area of the law. Rarer still is the opportunity for students to be able to take a seminar from one of the senior international practitioners in the field, using his work as the basis for this seminar. Drawing upon unique experiences in West Africa, a great deal of the new ideas and fresh thinking began with our work as the Chief Prosecutor of the international war crimes tribunal in Sierra Leone, called the Special Court for Sierra Leone. The seminar will use, as a case study, the entire creative process in West Africa of establishing the Office of the Prosecutor of the Special Court for Sierra Leone; from planning, preparation, and executing the many tasks necessary to prosecute war criminals in a forgotten and tragic land. Using real world and contemporary cases, vignettes, and scenarios this 2 credit hour seminar will give students a rare opportunity, to study and do research with the practitioner who created the entire prosecutorial plan to prosecute those who bore the greatest responsibility for war crimes and crimes against humanity that resulted in the murder, rape, maiming, and mutilation of over 1.2 million human beings.

**LAW 901 - Washington Lawyer Externship Seminar**  
*College of Law*  
1-2 credit(s)  
Client problems brought to a good D.C. attorney are almost always solved through a combination of legislative pressure, executive branch pressure, and perhaps ultimately litigation against either another party and/or an agency of the executive branch. Very often the best solutions to these problems are forged behind the scenes, the opposite of the way lawyers in other jurisdictions often serve their clients interests. This seminar will feature influential and successful D.C. attorneys and distinguished guest lecturers to discuss one or more client problems brought to them and how they went about a solution. Each week, students will go through a real case study problem set that the guest lecturer encountered in his or her practice, whether in government, a nonprofit, a corporation, or a law firm. After establishing a fact pattern, students will discuss the various options for solving the legal problem. Finally, students will hear from the guest lecturer how he or she actually attacked the legal problem, and the outcome if known. Students will also discuss projects that they have been working on along with any issues that may have arisen.

**LAW 902 - Law in D.C. Externship Program Placement**  
*College of Law*  
5-12 credit(s)  
The Syracuse Law Semester in D.C. Program will provide an elite professional and educational experience in a job market in which many of our students aspire to pursue careers. This externship experience provides students with an incredible opportunity to be exposed to the legal market of D.C., one that is unlike many others. With placements ranging from the Federal Bureau of Investigations, the U.S. Department of Justice, NASA, Securities Exchange Commission, U.S. Chamber of Commerce, Senate and House Offices, the D.C. Public Defender Service, the United Nations High Commission for Refugees, and a host of other nonprofit, federal military, federal government, political party, judicial and law firm placements, the options are premier and vast. Currently, there are over 65 placements for students to choose from. The program will be offered every summer, fall and spring semesters. The fall and spring semester programs will award 12 pass/fail credits for the 14 week externship placement and 2 graded credits for the Washington Lawyer Seminar. The summer program will award 5 pass/fail credits for the 8 week internship placement and 1 graded credit for the Washington Lawyer Seminar. Students will be expected to work a minimum of 35 hours per week in their placement, with attendance at the weekly seminar and post-seminar networking events, which allow students to build a professional network of contacts in the D.C. market.

**LAW 903 - Criminal Defense Law Clinic**  
*College of Law*  
6 credit(s) Every semester  
Student attorneys represent clients charged with misdemeanors and violations in Syracuse City Court. They engage in extensive fact investigation, interviewing, client counseling, and plea negotiations, and appear regularly in local courts. They also assist clients with civil matters related to the pending criminal charges.

**LAW 909 - Bankruptcy Clinic**  
*College of Law*  
2 credit(s)  
The pro bono bankruptcy clinic consists of a clinic open to second and third year students, and a pro bono volunteer program open to first year students. The upper division clinic students will represent an indigent client in filing a bankruptcy case and will be in charge of the team supervising the first year student volunteers. The clinic students will be responsible for obtaining from the clients all of the information required by the Bankruptcy Code for filing a bankruptcy case, organizing that information, drafting the petition and schedules, and representing the client at the official meeting of creditors. Students will also address an legal issues that arise in the case. The class component will involve formal training in basic consumer bankruptcy law and practice, and an open discussion of issues that arise in the cases.

**LAW 910 - Law in London: Clinical Internship**  
*College of Law*  
6 credit(s) Only during the summer  
Students will spend the first week of the seven week program attending lectures by authorities in English law. This introduction to the English Legal System will prepare the students for their internships by providing an overview of the fundamental tenets of English law, with an emphasis on English legal institutions, court structure, the legal profession, and adjudicative procedure in both civil and criminal cases. Classes during this first week will meet for a minimum of 15 hours and will be supplemented by visits to one of the Inns of Court and the Houses of Parliament and by a guided tour of Legal London. Following this first week of classes, students will undertake six-week internships with barristers, solicitors, public agencies or other legal organizations, under the supervision of Syracuse University College of Law faculty. Internships are full-time jobs, and students are expected to work the normal hours at their placements. During this six-week period these internship experiences are
augmented by once-a-week, two-hour evening seminars conducted by the program faculty and cooperating English practitioners.

Repeatable

**LAW 912 - Elder Law Clinic**  
*College of Law*  
6 credit(s) Every semester

This clinical course will focus on representation of the elderly in a variety of substantive areas, with initial focus on administrative proceedings regarding public benefits, especially Medicaid. Students will have substantial opportunities to interview and counsel clients, conduct fact investigation, grapple with thorny ethical issues unique to elderly clients, and advocate for clients in a variety of settings, including in administrative proceedings. Students will have primary responsibility for their cases, under the guidance of the faculty member. There may be opportunities for collaboration with medical staff from the SUNY Upstate Geriatric Clinic and other professionals working with the elderly.

COREQ: LAW 746 OR LAW 647

**LAW 914 - Low Income Taxpayer Clinic**  
*College of Law*  
3 credit(s) Every semester

The Low Income Taxpayer Clinic offers legal assistance to low income taxpayers who have controversies with the I.R.S. The controversies may include collection, examination, appeals or Tax Court matters. Student attorneys will also be involved in community outreach and education regarding income tax matters.

COREQ: LAW 722 AND (LAW 746 OR LAW 647)

**LAW 920 - Externship Program**  
*College of Law*  
2 credit(s) Every semester

The Externship Program provides students with the opportunity to work with lawyers. The program consists of a two-credit seminar that meets once a week which discusses lawyering as a profession and a 2 or 3 credit yearlong externship placement during which students work under the supervision of a lawyer in offices throughout Upstate New York.

COREQ: LAW 746 OR LAW 647

**LAW 921 - Externship Placement**  
*College of Law*  
2-3 credit(s) Every semester

This is a 2 or 3 credit externship placement where students work under the supervision of a lawyer in offices throughout Upstate New York.

**LAW 922 - Securities Arbitration Clinic**  
*College of Law*  
6 credit(s) Every semester

Provides legal assistance to small investors who have lost some or all of their investments as a result of improper conduct on the part of stockbrokers, investment advisors, securities firms, and mutual funds. Students enrolled in the SAC provide representation to eligible investors who are required to use the arbitration process for the resolution of their disputes.

COREQ: LAW 746 OR LAW 647

Repeatable 1 time(s)

**LAW 923 - Disability Rights Clinic**  
*College of Law*  
6 credit(s) Every semester

The Disability Rights Clinic is dedicated to providing representation to individuals and groups in our community who are unable to secure representation elsewhere. One reason DRC clients are unable to find other lawyers to represent them is due to their lack of financial resources. In our community, as elsewhere, the vast majority of lawyers provide legal assistance only to those who can afford to pay for their services. And in recent years, federal funding, the major source of funding for legal services for people with low or no incomes, has been reduced dramatically. A second reason DRC clients are unable to find lawyers elsewhere relates to the types of cases they may have which may involve controversial issues or conflicts of interest for other lawyers. DRC student attorneys practice in federal and state courts, and before administrative agencies in a broad range of civil rights matters, including race, gender, age and disability discrimination, sexual harassment, prisoners rights, immigration, accessibility under the Americans with Disabilities Act, and employment matters.

**LAW 925 - Social and Economic Justice in South Africa**  
*College of Law*  
1 credit(s)

The week-long visit to South Africa will study the constitutional, economic, and social history of South Africa as it has moved from apartheid to a multi-racial republic. Students will visit the Constitutional Court; government agencies including the Truth and Reconciliation Commission and the Commission for Conciliation, Mediation and Arbitration; several townships and municipalities; and a historically Black and historically White University. The students will meet with Constitutional Court justices, government officials, and University faculty involved in social and economic justice issues and learn about the entrenched systemic poverty, racism, and injustice that is the legacy of apartheid, and the efforts including legislation, policies, and programs to reverse the effects of apartheid. Applications for this course must be completed and approved before registration.

**LAW 926 - Veterans Legal Clinic**  
*College of Law*  
6 credit(s)

COREQ: LAW 746 OR LAW 647

**LAW 930 - Pro Bono Scholars Program Seminar**  
*College of Law*  
2 credit(s)

The Pro Bono Scholar seminar is a forum that facilitates discussions related to lawyering as a profession and where issues particular to the student's placement experience are addressed. It is a forum to discuss the role of lawyers in our justice system; the responsibilities lawyers have in obtaining access to this system and the practical implications of upholding the ethical standards demanded by the profession. Students will discuss the stresses particular to this profession, and explore the emotional commitment the profession demands.

**LAW 931 - Pro Bono Scholars Program Externship**  
*College of Law*  
10 credit(s)

Students in their final year of law school to devote their last semester of study to performing pro bono service for the poor through an approved externship, legal services provider, law firm or corporation. Placements are available in Central New York and Washington, DC. Only students selected by the Pro Bono Scholars Program committee and approved the New York Court of Appeals may register for the course. Students accepted for the Program will spend 12 weeks working fulltime in a placement beginning in March. Students will also have a seminar component, Pro Bono Scholars Seminar, for which they will earn two credits.

**LAW 933 - Land Use Planning and Public Regulation in Italy**  
*College of Law*  
1 credit(s) Irregularly

**LAW 955 - Community Development Law Clinic**  
*College of Law*  
6 credit(s) Every semester

The Community Development Law Clinic is one of only a handful of law school clinics nationwide which provide students the opportunity to represent not-for-profit housing and community organizations involved in affordable housing development and community economic development for people with low incomes. The Community Development Law Clinic was founded in 1988 with a grant from the United States Department of Education. The clinic has been awarded grants by the Corporation for National and Community Service and the New York City Department of Housing Preservation and Development. The clinic has assisted thousands of clients, including homeowners, landlords, and tenants.

**LAW 956 - Community Development Law Clinic**  
*College of Law*  
6 credit(s) Every semester

The Community Development Law Clinic is one of only a handful of law school clinics nationwide which provide students the opportunity to represent not-for-profit housing and community organizations involved in affordable housing development and community economic development for people with low incomes. The Community Development Law Clinic was founded in 1988 with a grant from the United States Department of Education. The clinic has been awarded grants by the Corporation for National and Community Service and the New York City Department of Housing Preservation and Development. The clinic has assisted thousands of clients, including homeowners, landlords, and tenants.
LAW 957 - Children's Rights & Family Law Clinic
College of Law
6 credit(s) Every semester
This combined clinical offering is designed for students interested in developing legal skills in the area of children's rights and in handling various civil cases. Students will assist in cases pertaining to education, school disciplinary hearings, suspension hearings, children's access to public education and public housing. Students will also represent clients in court and in negotiations to enforce child and spousal support and on divorce and custody cases. Representation of the clients includes interviewing witnesses, gathering evidence, negotiation settlements, appearing in court, and conducting hearings and trials. During the seminar, students will discuss the fundamentals of interviewing, counseling, negotiation, and written and oral advocacy as well as the substantive areas of family and public interest law, public assistance, and social security.
COREQ: LAW 746 OR LAW 647
Repeatable

LAW 959 - Advanced Legal Research
College of Law
3 credit(s) Irregularly
Advanced Legal Research expands upon the foundation of research skills acquired in the first year. The course addresses effective research methods and strategies, examines the structural and theoretical underpinnings of traditional and automated research systems, and explores specialized areas of research (such as legislative history, administrative law, and non-legal resources). Students will have ample opportunities to refine research techniques through hands-on practice sessions in the law library.

LAW 995 - Special Project
College of Law
1-9 credit(s) Irregularly

Master of Laws

LLM 900 - American Legal System
College of Law
3 credit(s) At least 1x fall or spring
This course is designed to introduce students to United States law. The course will offer a survey of the United States legal system, an introduction to United States constitutional law and provide an overview of multiple areas of United States doctrinal law both substantive and procedural.

LLM 901 - Legal Writing for International Students
College of Law
2 credit(s) At least 1x fall or spring
This course will instruct the student in legal research, writing and analysis. It is specifically designed for LLM students.

LLM 902 - International LL.M. Prep Course
College of Law
1 credit(s)
An introduction to the process of American legal education and assessment. The class will teach an introduction to the Socratic method, the case briefing system of legal analysis and introduce skills in preparation for common legal assessment methods, including case briefing, case analysis, exam taking methodology, and other essential skills.

LLM 903 - Intro to the Study of American Law
College of Law
1 credit(s) At least 1x fall or spring
This course will prepare LL.M. students for their study of law by introducing students to the Socratic method, case briefing, IRAC writing structure, and Bluebook citation forms; introducing students to the structure of American government and court systems; introducing students to the sources of American law; and introducing students to discrete primary concepts of doctrinal law in such subjects as Constitutional Law, Contracts, and Torts.

LLM 914 - Technology Innovation Law & Practice
College of Law
3 credit(s) Every semester
This course provides LLM students with an integrated understanding of the technical, business, and legal factors involved in bringing new technologies to market. This is a year-long course that combines traditional and applied learning on topics ranging from basic intellectual property law and performing patent searches to economics to finance and business areas such as financing technology innovation. The course includes multiple guest lectures from practicing professionals involved in technology transactions at universities as well as private companies and in law firms. At the conclusion of the course, students will have a broad knowledge of technology innovation law and practice. Students will apply knowledge to actual new technology commercialization projects. Students work in teams consulting with companies, entrepreneurs or universities that are seeking to commercialize new technologies. Finished products include an in-depth report and presentation covering such things as: analyzing the technology, investigating intellectual property protection, examining the market landscape, identifying any regulatory concerns, and exploring opportunities for funding or licensing. Students will also engage in client consults and short term research projects.
Repeatable, 3 credits maximum
David B. Falk College of Sport and Human Dynamics

Diane Lyden Murphy, Dean
falk.syr.edu/

About the College

David B. Falk College of Sport and Human Dynamics

Welcome to the David B. Falk College of Sport and Human Dynamics. The Falk College brings together Syracuse University’s departments of Human Development and Family Science; Marriage and Family Therapy, Public Health, Food Studies and Nutrition; Sport Management and Social Work in an environment of cross-disciplinary teaching, research, practice and service. Through classroom learning and hands-on experience, our students learn by example and by doing to become professionals who will provide services that enhance the emotional and physical well-being of individuals, families, and communities.

As educators, Falk College faculty and staff are focused on students’ academic programs and set very high expectations for them in the classroom and in the community. Many attributes make the Falk College unique, offering a valuable college experience, including:

Students in all Falk College academic programs have the opportunity to perform research working with faculty mentors.

Students benefit from the Falk College’s numerous long-term relationships with national and Central New York-area agencies and businesses by gaining valuable hands-on learning through internships and field placements.

Members of the Falk College faculty have tremendous connections in their respective fields; consequently, students benefit from these connections through internship/job placement opportunities, one-on-one career guidance, and guest lectures on campus.

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

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).

Graduate Program Overview

David B. Falk College Of Sport And Human Dynamics

Diane Lyden Murphy, Dean
315-443-2027

The David B. Falk College of Sport and Human Dynamics is Syracuse University’s most service-oriented college, where 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 discipline lines to find new, more effective approaches to important social issues. Master’s degree programs are offered in child and family studies, food studies, global health, marriage and family therapy, nutrition science, public health, sport management and social work; while Ph.D. programs are offered in child and family studies and marriage and family therapy.

Students prepare to become professionals who enhance the emotional and physical well-being 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. Requirements are flexible in each program of study, allowing students to choose combinations of courses according to their personal and professional interests. Additional University resources allow students to further enhance their studies and professional development.

The integration of theory and practice is at the heart of the college’s mission. Through field and clinical placements in a wide variety of settings, students gain valuable hands-on experience that complements their classroom learning and better prepares them for their careers.

Today, graduates of the College hold positions of importance and distinction all over the world in such fields as education, research, child development, dietetics, nutrition, communications, community and social service, family therapy, government, business and industry, among many others.

For more information about Falk College Graduate admissions, please call or visit our admissions office at:

David B. Falk College of Sport and Human Dynamics

340 White Hall
Syracuse, New York 13244
(315) 443-5555
falk@syr.edu

Fees

Laboratory fees are required in certain courses where specialized equipment and materials are provided. A technology fee is assessed for all Falk College majors and minors, and all non-Falk students who take a Falk College course. Complete breakdown for Falk College Fees may be found in the annual Tuition Fees and Related Policies Bulletin.

Graduate Financial Assistance

Falk College academic programs offer a limited number of graduate assistantships and tuition scholarships. Graduate admissions officers in each graduate program allocate this financial aid based largely on merit. Graduate assistantships in the form of research assistantships and teaching assistantships are awarded on a competitive basis from among applications received by February 1; assistantships are usually not available at any other time of the year. Research assistants are required to assist their sponsoring faculty to perform research. Teaching assistants are required to assist with undergraduate/graduate instruction as well as to work on research projects. Recipients of these assistantships receive a stipend in addition to a tuition scholarship.

Syracuse University fellowships are awarded competitively from applications received by
January 1 on an all-University basis. Doctoral fellows receive a stipend, plus a tuition scholarship of 30 credits for the academic year. Fellows devote full time to their studies and are not assigned duties.

To apply for University fellowships or College assistantships, check the proper place on the application for admission.

Facilities

The Falk College consists of three facilities, the new Falk Complex, Peck Hall, and the Bernice M. Wright laboratory School.

The Falk Complex, which includes both MacNaughton and White Halls, is located on the western portion of the Syracuse University campus. The renovated complex includes a centralized Falk Admissions center that offers prospective students the chance to see Falk College in action on a daily basis; an expanded Student Services space conducive to providing programming that helps students be successful; and the new Experimental Food Lab Kitchen, Commercial Kitchen, Baking Nook, and Susan Klenk Cafe. The premier and state-of-the-art kitchens are equipped with commercial equipment and appliances. Combined with our Cafe/Classroom, the kitchens offer unparalleled resources for the College. One of the most exciting parts of the experimental food kitchen is the video camera system which allows our instructors/faculty to broadcast classes, food demos and seminars from our location to anywhere on campus, and across the country. Our facilities represent the next chapter - it sets the stage for industry-leading, forward-thinking approach to food culture, nutrition, research and food studies development. It provides students with the science and technology to create extraordinary food study - science - technology experiences unimaginable to previous generations. In addition to administrative and academic program offices and classrooms, the Falk Complex also offers students hands-on experiences in simulated environments like the Nutrition Assessment Lab and Sport Management Technology Center as well as dedicated study/collaborative space, computer labs and comforts like a café and student lounge.

The Marriage and Family Therapy Department is purposefully located in Peck Hall in the Syracuse community at 601 E. Genesee Street, allowing students a unique opportunity for education in real time within and among a diverse and professionally trained mental health work force. This site includes the Couple and Family Therapy Center, a clinical training and research facility equipped for live and videotaped supervision, which provides MFT services to the surrounding community. The MFT program works cooperatively with a number of well-established local human service agencies that provide training and research opportunities for MFT students.

The Bernice M. Wright (BMW) Child Development Laboratory School is located on Syracuse University’s South Campus, Falk College celebrated the grand reopening of the Bernice M. Wright Child Development Lab School on November 30, 2012, showcasing its recently renovated and expanded facilities. Bernice M. Wright embraces inclusion, celebrating cultural and developmental diversity and recognizing the similarities and differences that make the world an exciting place. Through collaboration with community-based service providers, the school enrolls children with varying developmental abilities, adding greatly to the overall classroom experience. The site serves as a teacher training facility and supports research in early childhood education.

Research Centers & Institutes

Aging Studies Institute

Aging Studies Institute is a collaborative initiative of the Maxwell School of Citizenship & Public Affairs and the David B. Falk School of Sport and Human Dynamics. Its mission is to coordinate and promote aging-related research, training, and outreach at Syracuse University. With 40 faculty affiliates from more than a dozen departments, ASI provides multi-disciplinary research and education that is relevant to almost every academic discipline on campus.

The Jack Reilly Institute for Early Childhood and Provider Education

Through its training and research efforts, the general aim of the Jack Reilly Institute for Early Childhood and Provider Education is to improve the knowledge base and provide hands-on training for early childhood teachers and providers on childhood safety in home-based and center-based childcare within the context of culturally-relevant, developmentally-appropriate early childhood education practices. Additional information about the Jack Reilly Institute can be found at http://falk.syr.edu/ChildFamilyStudies/Jack_Reilly.aspx.

Bernice M. Wright Child Development Laboratory School

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.

Human Development and Family Science

Department of Human Development and Family Science

Ambika Krishnakumar, 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, Matthew Mulvaney, Kamala Ramadoss, Rachel Razza, Jaipaul L. Roopnarine

Graduate

Rachel Razza, Graduate Program Director; 315-443-7377

A unique aspect of the Department of Human Development and Family Science is the interdisciplinary training of the faculty who have advanced degrees in developmental psychology, sociology, education, and gerontology. The graduate programs (M.A., M.S., Ph.D.) integrate theory and practice from these fields to facilitate understanding of human development over the life span within and across diverse family and cultural settings. Supervised participation in early childhood education and research programs provide students with firsthand experiences in applying and integrating theory.

The department has a strong reputation for its pioneering work in infant development, parent education, child care, and parent-child relations in different cultures.

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 developmentally-appropriate early childhood education practices and issues pertaining to childhood safety.

Child and Family Studies, MA

Contact

Rachel Razza, Graduate Director, 144 White Hall
315-443-7377, razzaa@syr.edu

Faculty

Colleen Baish Cameron, D. Bruce Carter, Joseph P Fanelli, Irene Kehres, Ambika Krishnakumar, Eunjoo Jung, Teresa MacDonald, Matthew Mulvaney, Kamala Ramadoss, Rachel Razza,
Program Description

The master's degree (M.A./M.S.) in child and family studies promotes an understanding of children, families, and the ways to facilitate their development. With an emphasis on the importance of social-cultural context, students gain broad knowledge of the study of childhood and family systems across various cultural and societal contexts throughout the lifespan.

The program requires completion of 30 credits and active research focusing on child development, family studies, or early childhood education. In addition, it trains graduate students in early childhood education through campus internships at the Bernice M. Wright Child Development Laboratory School.

Students in the department may earn a master of arts (M.A.) or a master of science (M.S.) degree gaining specialization in the areas of child development, family studies, or early childhood education.

All students must complete the core course requirements. Depending upon their interests, master's students focus their coursework in specific areas of child development, family studies, or early childhood education. Supplemental coursework may be selected from additional CFS courses and other University departments such as anthropology, psychology, education, sociology, gerontology, social science, nutrition, special education, or women's studies. All students must file a tentative program of study in their second semester. Students transferring courses from another institution must file a program of study prior to completing 12 credits at Syracuse University.

In addition to coursework, an M.S. degree requires the completion of a master's thesis. The M.A. requires a master's project (see graduate manual for details).

The concentration in early childhood education focuses on the application of principles derived from child and family studies to educational programs for young children. Students selecting this concentration have an opportunity to participate in preschool programs at the Bernice M. Wright Child Development Laboratory School to develop skills for supervision of preschool or paraprofessional teacher trainees.

The M.A./M.S. programs prepare students to work directly with children and families in various educational, familial or community settings. Courses and training emphasize multicultural perspectives in child and family relationships and diverse research methodologies and scholarship.

Admissions

Students seeking admission to the Department of Human Development and Family Science must meet the general admissions requirements of the Graduate School. While no single factor determines entry to the program, competitive applicants typically have a minimum of: 1) GPA of 3.00 or higher (undergraduate and/or master's degree); 2) GRE score of 144 Quantitative score, 153 Verbal score (exam taken on or after August 1st, 2011); Combined GRE score of 1000 (exam taken before August 1, 2011). Please note, the GRE exam must be taken within the last five years; 3) TOEFL scores of 577 (paper test) and 100 for the Internet based (IBT) test (For international students whose primary language is not English).

Financial Support

Falk College academic programs offer a limited number of graduate assistantships and tuition scholarships. Graduate admissions officers in each graduate program allocate this financial aid based largely on merit. Graduate assistantships in the form of research assistantships and teaching assistantships are awarded on a competitive basis from among applications received by February 1; assistantships are usually not available at any other time of the year.

Research assistants are required to assist their sponsoring faculty to perform research. Teaching assistants are required to assist with undergraduate/graduate instruction, this includes teaching assistantships at the Bernice M. Wright Child Development Laboratory School. Recipients of these assistantships receive a stipend in addition to a tuition scholarship.

Syracuse University fellowships are awarded competitively from applications received by January 1 on an all-University basis. Doctoral fellows receive a stipend, plus a tuition scholarship of 30 credits for the academic year. Fellows devote full time to their studies and are not assigned duties.

To apply for University fellowships or College assistantships, check the proper place on the application for admission.

Transfer Credit

Master's students are limited to a maximum of 6 transfer credits.

Part-time Study

Students may pursue their graduate degree on a full or part-time basis. Students must enroll in a minimum of nine credit hours for full-time status. Students enrolled in six credit hours or less are considered part-time.

Satisfactory Progress

Per University Rules and Regulations, graduate students must earn a minimum average of 3.00 for work comprising the program for the degree or certificate and a minimum cumulative GPA of 2.800.

To maintain good standing, all CFS graduate students are required to:

• Maintain a minimum cumulative GPA of 3.0, including courses taken outside the department (e.g., anthropology, education, psychology, sociology, etc.).
• Earn a B or better in all required courses.

Core Courses required for the M.A. degree are:

• CFS 615 - Graduate Proseminar in Child and Family Studies 3 credit(s)
• CFS 621 - Statistical Concepts I 3 credit(s)
• CFS 631 - Research Methods/CFS I 3 credit(s)
• CFS 637 - Theo,Intrp,Apps/Child Dev 3 credit(s)
• CFS 648 - Family Theory:Interp&Applc 3 credit(s)
• CFS 667 - Child&Fam Cnss/Ctlr Persp 3 credit(s)

Suggested courses for each of the four possible areas of concentration are:

Child Development

• CFS 633 - Intrvntn Mtls:Infnt&Pre-Sc 3 credit(s)
• CFS 635 - Obs&Assesmt/Infnts&Chldrn 3 credit(s)
• CFS 638 - Child Development in the Context of Schools 3 credit(s)
• CFS 645 - The Developing Infant 3 credit(s)
• CFS 665 - Language Development in Children & Families 3 credit(s)
• CFS 667 - Child&Fam Cnss/Ctlr Persp 3 credit(s)
• CFS 830 - Sem Child Development 3 credit(s)
• CFS 835 - Iss & Probs/Chld&Fam Devt 3 credit(s)

Family Studies

• CFS 557 - Separation & Divorce: Impact on Children & Families 3 credit(s)
• CFS 649 - Marital and Cohabitating Roles and Relationships 3 credit(s)
• CFS 657 - Contemporary Issues/Human Sexuality 3 credit(s)
• CFS 659 - Families and Workplaces 3 credit(s)
• CFS 668 - Fam Var:Soc Class&Eth Det 3 credit(s)
• CFS 687 - Family Stress and Resilience: Theory and Interpretation 3 credit(s)
• CFS 840 - Seminar: Child Development and Family Relations 3 credit(s)

Early Childhood Education

• CFS 534 - Practicum/Early Childhood Education 3 credit(s)
• CFS 597 - Early Childhood Program Administration 3 credit(s)
• CFS 635 - Obs&Assesmt/Infnts&Chldrn 3 credit(s)
• CFS 638 - Child Development in the Context of Schooling 3 credit(s)
• CFS 645 - The Developing Infant 3 credit(s)
• CFS 665 - Language Development in Children & Families 3 credit(s)

Distribution of Credits
Core Requirements 18
Suggested Courses 9 *
Thesis/Project 3
Total 30

Child and Family Studies, MS

Contact
Rachel Razza, Graduate Director, 144 White Hall 315-443-7377, rrazza@syr.edu

Faculty
Colleen Baish Cameron, D. Bruce Carter, Joseph P. Fanelli, Irene Kehres, Ambika Krishnakumar, Eunjoo Jung, Teresa MacDonald, Matthew Mulvany, Kamala Ramadoss, Rachel Razza, Jaipaul L. Roorooarine

Program Description
The master's degree (M.A./M.S.) in child and family studies promotes an understanding of children, families, and the ways to facilitate their development. With an emphasis on the importance of social-cultural context, students gain broad knowledge of the study of childhood and family systems across various cultural and societal contexts throughout the lifespan.

The program requires completion of 30 credits and active research focusing on child development, family studies, or early childhood education. In addition, it trains graduate students in early childhood education through campus internships at the Bernice M. Wright Child Development Laboratory School.

Students in the department may earn a master of arts (M.A.) or a master of science (M.S.) degree gaining specialization in the areas of child development, family studies, or early childhood education.

All students must complete the core course requirements. Depending upon their interests, master's students focus their coursework in the specific areas of child development, family studies, or early childhood education. Supplemental coursework may be selected from additional CFS courses and other University departments such as anthropology, psychology, education, sociology, gerontology, social science, nutrition, special education, or women's studies. All students must file a tentative program of study in their second semester. Students transferring courses from another institution must file a program of study prior to completing 12 credits at Syracuse University.

In addition to course work, an M.S. degree requires the completion of a master's thesis. The M.A. requires a master's project (See graduate manual for details).

The concentration in early childhood education focuses on the application of principles derived from child and family studies to educational programs for young children. Students selecting this concentration have an opportunity to participate in preschool programs at the Bernice M. Wright Child Development Laboratory School to develop skills for supervision of preservice or paraprofessional teacher trainees.

The M.A./M.S. programs prepare students to work directly with children and families in various educational, familial or community settings. Course and training emphasize multicultural perspectives in child and family relationships and diverse research methodologies and scholarship.

Admissions
Students seeking admission to the Department of Human Development and Family Science must meet the general admissions requirements of the Graduate School. While no single factor determines entry to the program, competitive applicants typically have a minimum of: 1) GPA of 3.00 or higher (undergraduate and/or master's degree); 2) GRE score of 144 Quantitative score, 153 Verbal score (exam taken on or after August 1st, 2011); Combined GRE score of 1000 (exam taken before August 1, 2011). Please note, the GRE exam must be taken within the last five years; 3) TOEFL scores of 577 (paper test) and 100 for the Internet based (IBT) test (For international students whose primary language is not English).

Financial Support
Falk College academic programs offer a limited number of graduate assistantships and tuition scholarships. Graduate admissions officers in each graduate program allocate this financial aid based largely on merit. Graduate assistantships in the form of research assistantships and teaching assistantships are awarded on a competitive basis from among applications received by February 1; assistantships are usually not available at any other time of the year.

Research assistants are required to assist their sponsoring faculty to perform research. Teaching assistants are required to assist with undergraduate/graduate instruction, this includes teaching assistantships at the Bernice M. Wright Child Development Laboratory School. Recipients of these assistantships receive a stipend in addition to a tuition scholarship.

Syracuse University fellowships are awarded competitively from applications received by January 1 on an all-University basis. Doctoral fellows receive a stipend, plus a tuition scholarship of 30 credits for the academic year. Fellows devote full time to their studies and are not assigned duties.

To apply for University fellowships or College Assistantships, check the proper place on the application for admission.

Transfer Credit
Master's students are limited to a maximum of 6 transfer credits.

Part-time Study
Students may pursue their graduate degree on a full or part-time basis. Students must enroll in a minimum of nine credit hours for full-time status. Students enrolled in six credit hours or less are considered part-time.

Satisfactory Progress
Per University Rules and Regulations, 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.

To maintain good standing, all CFS graduate students are required to:

- Maintain a minimum cumulative GPA of 3.0, including courses taken outside the department (e.g., anthropology, education, psychology, sociology, etc.)
- Earn a B or better in all required courses.

Core Courses required for the M.S. degree are:

- CFS 615 - Graduate Seminar in Child and Family Studies 3 credit(s)
- CFS 621 - Statistical Concepts I 3 credit(s)
- CFS 631 - Research Methods/CSs I 3 credit(s)
- CFS 637 - Theo,Intrp,Apps/Child Dev 3 credit(s)
- CFS 648 - Family Theory:Interp&Applc 3 credit(s)
- CFS 667 - Child&Fam Crss/Cltrl Persp 3 credit(s)

Suggested courses for each of the four possible areas of concentration are:

Child Development
David B. Falk College of Sport and Human Dynamics

Contact
Rachel Razza, Graduate Director, 144 White Hall
315-443-7377, rrazza@syr.edu

Faculty
Colleen Baish Cameron, D. Bruce Carter, Joseph P. Fanelli, Irene Kehres, Ambika Krishnakumar, Eunjo Jung, Teresa MacDonald, Matthew Mulvaney, Kamala Ramadoss, Rachel Razza, Jaipaul L. Roopnarine

Description
The Ph.D. program consists of 72 credits, including completion of a dissertation. The doctoral (PhD) program provides in-depth studies of familial, societal, and cultural factors that shape child development and family relationships. A primary focus is on scientific inquiry and research methodology employed in disciplines such as education, psychology, social sciences, and women's studies. It trains professionals for careers in academia, research, and child and family human service agencies.

Courses and training emphasize multicultural perspectives in child and family relationships and diverse research methodologies and scholarship. In addition, doctoral students have the opportunity to obtain university teaching instruction and experience through participation in Syracuse University's Future Professorate Program.

Admission
Students seeking admission to the Department of Human Development and Family Science must meet the general admissions requirements of the Graduate School. While no single factor determines entry to the program, competitive applicants typically have a minimum of: 1 GPA of 3.0 or higher (undergraduate and/or master's degree); 2) GRE score of 144 Quantitative score, 153 Verbal score (exam taken on or after August 1st, 2011); Combined GRE score of 1000 (exam taken before August 1, 2011). Please note, the GRE exam must be taken within the last five years; 3) TOEFL scores of 577 (paper test) and 100 for the Internet based (IBT) test (For international students whose primary language is not English).

Core course requirements (24 credits)
- CFS 615 - Graduate Proseminar in Child and Family Studies 3 credit(s)
- CFS 637 - Theo,Intrp,Apps/Child Dev 3 credit(s)
- CFS 648 - Family Theory:Interp/Applic 3 credit(s)
- CFS 621 - Statistical Concepts I 3 credit(s)
- CFS 622 - Statistical Concepts II 3 credit(s)
- CFS 631 - Research Methods/Cfs I 3 credit(s)
- CFS 667 - Child&Fam Crss/Ctrl Persp 3 credit(s)
- CFS 732 - Research Methods/CFS II 3 credit(s)

Elective Credits (36 credits)
In addition to completing the core requirements (24 credits), students are required to take additional supporting courses (36 credits) from within or outside the college in areas such as education, psychology, the social sciences, and women's studies. Students should consult with their faculty advisor prior to selecting elective courses. Students may choose courses at the 500
Marriage and Family Therapy

Marriage and Family Therapy
Thom deLara, Chair, 315-443-9830
Peck Hall, 601 E. Genesee Street

Faculty
Deborah Coolhart, Thom deLara, Joseph P. Fanelli, Rashmi Gangamma, Linda Stone Fish, Dyane Watson
Clinic Supervisor Tracey Reichert-Schimpp
Internship Coordinator Lisa Tedeschi

Graduate Program
Linda Stone Fish, Graduate Program Director, 315-443-3024

The Department of Marriage and Family Therapy offers master of arts (M.A.) and doctor of philosophy (Ph.D.) degrees in marriage and family therapy. Students gain a solid knowledge of marriage and family therapy theory and techniques. Students receive extensive hands-on training, both at the Couple and Family Therapy Center, a clinical training and research facility, and at local community sites. The faculty seeks to promote the advancement of the practice and profession of marriage and family therapy through scholarly research, education, training, and clinical practice.

The department also offers a Certificate of Advanced Study (CAS) in Trauma-Informed Practice, which is structured for clinicians, mental health professionals, and practitioners from allied disciplines to expand their knowledge and skills in the field of trauma response and intervention. Trauma-informed practice is based on an understanding of the vulnerabilities or triggers of trauma survivors that traditional service delivery approaches may exacerbate so that these services and programs can be more supportive and avoid re-traumatization.

Dual M.S.W./M.A. program in Social Work and Marriage and Family Therapy

The interdisciplinary program allows students to complete degrees in two distinct professions, the Social Work, MSW and the Marriage and Family Therapy, MA in three years. The dual degree exposes students to the philosophical and legal distinctions of both degrees, creates a unique opportunity for MSW students to deepen their clinical training with couples and families, and introduces MFT students to a broader range of social work and social welfare course offerings, as well as the art of clinical diagnosis which is in the scope of practice of the Social Work profession.

The dual degree is offered as both a 96-credit, three-year program (for students not admitted to the Advanced Standing MSW program), or a 78-credit two-year program (for students admitted to the MSW Advanced Standing program).

The program extends the advanced clinical preparation of the MSW to include an additional year of intensive MFT clinical supervision. It combines the MSW ability to work with systems of all sizes with the more singular focus on families by MFT.

Facilities
The department is housed with the Couple and Family Therapy Center, a clinical training and research site at Peck Hall, 601 E. Genesee Street, Syracuse. The center is equipped for live and digitally recorded supervision. Individual, group, couple and family therapy is offered to members of the Syracuse community by marriage and family therapy graduate students under the supervision of the clinical faculty who operate from a family systems perspective.

Marriage and Family Therapy, MA

Contact
Thom deLara, Department Chair and Professor of Practice,
315-443-9830
tdelara@syr.edu

Faculty
Deborah Coolhart, Thom deLara, Joseph P. Fanelli, Rashmi Gangamma, Linda Stone Fish, Dyane Watson

Description
The 60 credit SU Marriage and Family Therapy (SUMFT) program educates and trains clinicians, scholars and researchers in the profession of Marriage and Family Therapy. SU MFT carries out this mission through the "Self and Systems" training and supervision approach which incorporates the integration of self-understanding of students in clinical training, with a systems framework for clinical work with clients.

Students gain a solid knowledge of marriage and family therapy theory and techniques. Students get extensive hands-on training, both at the Couple and Family Therapy Center, an on-campus clinical training and research facility, and at local community sites.

Applicants to the master's degree in Marriage and Family Therapy are screened for admissions by a committee of faculty of the sponsoring department.
(Marriage and Family Therapy). Requirements include a completed bachelor’s degree, recent GRE scores, 3 letters of recommendation, and a personal statement. There is no minimum GPA required for admission, although the MFT Department uses a benchmark of 3.4 as a standard.

Financial Support
Limited financial aid is available in the form of graduate assistantships and scholarship credits. Financial aid is determined on the basis of merit.

Facilities
Most of the courses in the master's degree are taught at Peck Hall, which is a newly renovated 30,000 square foot facility that has recently been completely renovated and adapted for a clinical training environment. The building contains three smart classrooms and a new computer lab with 24 stations.

Transfer Credit
Up to 12 credits of degree applicable course work may be transferred to the MA in Marriage and Family Therapy. A grade of B or higher is required for a course to transfer.

Satisfactory Progress
Per University rules and regulations, Graduate students must earn a minimum average of 3.0 for work comprising the program for the degree or certificate and a minimum cumulative GPA of 2.8.

Part-time study
A 3-year part-time program of study is available.

Course Requirements for M.A. Program

Required Courses - 51 credits
- MFT 567 - Sexual Issues for the Helping Professional 3 credit(s)
- MFT 661 - Introduction to Family Therapy Practice 3 credit(s)
- MFT 662 - Systems Dynamics in a Group Setting 3 credit(s)
- MFT 671 - Introduction to Family Systems 3 credit(s)
- MFT 672 - Couple Therapy: Theory and Techniques 3 credit(s)
- MFT 681 - Marriage and Family Therapy Ethics and Issues 3 credit(s)
- MFT 682 - Marriage and Family Therapy Theory and Techniques 3 credit(s)
- MFT 724 - Psychopathology 3 credit(s)
- MFT 663 - Applied Research in Social Work 3 credit(s)
- MFT 684 - Family Therapy Perspectives on Cultural Diversity 3 credit(s)
- MFT 688 - Family Therapy Across the Life Cycle 3 credit(s)
- MFT 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)
- MFT 750 - Introduction to Marriage & Family Therapy Practicum 3 credit(s)
- MFT 760 - Practicum in Marriage and Family Therapy I 3 credit(s)
- MFT 761 - Practicum in Marriage & Family Therapy II 3 credit(s)
- MFT 762 - Practicum in Marriage and Family Therapy III 3 credit(s)
- MFT 763 - Practicum in Marriage and Family Therapy IV 3 credit(s)
- MFT 997 - Master's Thesis or Project 0-6 credit(s) or
- Comprehensive Exam

Elective Courses - 9 credits
- EDU 647 - Statistical Thinking and Applications 3 credit(s)
- MFT 641 - Divorce Mediation 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)
- MFT 764 - Practicum in Marriage and Family Therapy V 1-3 credit(s) (3 credits required)
- MFT 673 - Child Development Theory and Family Therapy Interventions 3 credit(s)
- MFT 603 - Introduction to Trauma Studies 3 credit(s)
- MFT 643 - Family Therapy with Complex Trauma 3 credit(s)
- MFT 687 - Spirituality in Therapy 3 credit(s)
- MFT 686 - Play Therapy with Children and Families 3 credit(s)
- MFT 642 - Therapy with LGBTQ Couples and Families 3 credit(s)
- MFT 644 - Family Therapy with LGBTQ Youth 3 credit(s)
- MFT 645 - Queering Theory, History and Clinical Practice 3 credit(s)
- SWK 739 - Applied Neuroscience in the Human Services 3 credit(s)
- SWK 740 - Treatment of Complex Trauma with Individuals 3 credit(s)
- SWK 742 - Violence, Bullying, & Trauma: Clinical Perspectives 3 credit(s)
- SWK 727 - Family Violence: Policy, Practice and Research 3 credit(s)
- SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents 3 credit(s)
- SWK 682 - Introduction to Equine Assisted Activities and Therapies 3 credit(s)
- HTW 605 - Cognitive Behavioral Approaches to Stress Reduction 3 credit(s)
- HTW 618 - Alcohol, Other Drugs, Sex and Gambling: Dynamics of Addiction 3 credit(s)

Marriage and Family Therapy, PhD

Contact
Linda Stone Fish, Ph.D., Graduate Director
flstone@syr.edu
315-443-3024

Faculty
Deborah Coolhart, Thom deLara, Joseph P. Fanelli, Rashmi Gangamma, Linda Stone Fish, Dyane Watson

Program Description
The 72 credit doctoral program in Marriage and Family Therapy at Syracuse University seeks to prepare scholars who will advance theory, research, and teaching in the field of marriage and family therapy. Students are prepared primarily for teaching, supervisory, and research positions in graduate degree-granting institutions, training institutes, and health care settings. The program builds upon a clinical Master's Degree in Marriage and Family Therapy, and is designed to provide students with an understanding of advanced theory in marriage and family therapy with expertise in process and outcome research methodology in marriage and family therapy.

Accreditation
The Doctoral Program in Marriage and Family Therapy is accredited by the Commission for Accreditation for Marriage and Family Therapy Education (COAMFTE)

Admission
A completed master's degree in Marriage and Family Therapy, or the equivalent, is required. GRE's are required for all students applying to the Ph.D. program. An admissions committee consisting of MFT faculty members will consider requests for admission to the program.

Doctoral Degree Requirements
The Ph.D. in Marriage and Family Therapy requires 72 credits. Students are allowed to transfer up to 33 credit hours from an M.A. in MFT or equivalent. Additional requirements include 12 credits of advanced theory and practice; 12 credits of advanced research methodology; 3 credits of elective; 3 credits of advanced practicum; and 9 credits of dissertation. Requirements also include...
a 9-month clinical internship and satisfactory completion of the doctoral qualifying examination and the doctoral dissertation and related oral examination.

Learning Outcomes:
The doctoral program in Marriage and Family Therapy at Syracuse University prepares students for teaching, supervisory, and research positions in graduate degree-granting institutions, training institutes, and health care settings.

Transfer credit
Up to 33 credits may be transferred from an accredited master's degree in Marriage and Family Therapy (or its equivalent).

Part-time study
Students are required to spend a minimum of one year in residence (full-time study).

Satisfactory progress
Per University Rules and Regulations, graduate students must earn a minimum average of 3.0 for work comprising the program for the degree or certificate and a minimum cumulative GPA of 2.8.

Degree Requirements
Advanced Theory and Practice
12 credits

Three courses (9 credits) from the following:

- MFT 861 - Supervision in Marriage and Family Therapy 3 credit(s)
- MFT 862 - Advanced Family Therapy with Children and Adolescents 3 credit(s)
- MFT 863 - Advanced Couple Therapy 3 credit(s)
- MFT 865 - Advanced Family Therapy Theory 3 credit(s)
- MFT 870 - Practicum in Marriage and Family Therapy Supervision 1 credit(s)
- MFT 875 - Cultural Diversity: Family Theory and Therapy 3 credit(s)
- MFT 960 - Internship in Marriage and Family Therapy 0 credit(s)

Plus 1 course (3 credits) from the following

- MFT 772 - Divorce and Remarriage: Family Theory and Therapy 3 credit(s)
- MFT 773 - Family Violence: Theory and Therapy 3 credit(s)
- MFT 774 - Parenting and Family Enrichment: Programs and Research 3 credit(s)
- MFT 776 - Dysfunctional Families: Theory and Therapy 3 credit(s)
- MFT 777 - Family Perspectives on Gender Roles and Socialization: Theory & Therapy 3 credit(s)
- MFT 778 - Loss Across the Life Cycle: Family Theory and Therapy 3 credit(s)
- MFT 779 - Sexual Identity and Family Therapy 3 credit(s)
- MFT 864 - Family Systems and Family Health 3 credit(s)
- MFT 860 - Advanced Family Therapy Practicum 1 credit(s)
- MFT 861 - Parenting and Family Enrichment: Programs and Research 3 credit(s)
- MFT 862 - Advanced Family Therapy with Children and Adolescents 3 credit(s)
- MFT 863 - Advanced Couple Therapy 3 credit(s)
- MFT 865 - Advanced Family Therapy Theory 3 credit(s)
- MFT 870 - Practicum in Marriage and Family Therapy Supervision 1 credit(s)
- MFT 875 - Cultural Diversity: Family Theory and Therapy 3 credit(s)
- MFT 960 - Internship in Marriage and Family Therapy 0 credit(s)

Advanced Research Methodology 12 credits

- CFS 622 - Statistical Concepts II 3 credit(s)
- CFS 732 - Research Methods/CFS II 3 credit(s)
- MFT 882 - Assessment and Research Methods in Marriage and Family Therapy 3 credit(s)
- MFT 885 - Qualitative Research Methods in Family Therapy 3 credit(s) (must take prior to, or concurrently with MFT 882)

Electives 3 Credits

Advanced Practicum 3 credits total

- MFT 860 - Advanced Family Therapy Practicum 1 credit(s)

Masters Courses (Transferred) (Maximum) 33 credits

Internship
(1,000 Hours of client contact)

- MFT 960 - Internship in Marriage and Family Therapy 0 credit(s)

Dissertation 9 Credits

- MFT 999 - Dissertation 1-12 credit(s) (9 credits required)

Total credits required: 72 credits

Social Work and Marriage and Family Therapy Dual Degree, MA/MSW

Contact:
Keith Alford, Director School of Social Work
kalford@syr.edu 315-443-5562

Program Description:
This interdisciplinary program allows the student to complete degrees in two distinct professions, the Master of Social Work (MSW) and the Master of Arts in Marriage and Family Therapy (MFT) in three years. The dual degree exposes students to the philosophical and legal distinctions of both degrees, creates a unique opportunity for MSW students to deepen their clinical training with couples and families, and introduces MFT students to a broader range of social work and social welfare course offerings as well as the art of clinical diagnosis which is in the scope of practice of the Social Work profession.

Accreditation:
The MSW program is accredited by the Council on Social Work Education.
The MFT program is accredited by the Commission on Accreditation for Marriage and Family Therapy Education.

Part-time Study:
Given the rigorous nature of this program only full-time study is allowed. Students who are admitted to the program and drop below fulltime as defined by the sample program plan below will not be able to continue in the dual program.

Admission:
Applicants must have earned a bachelor’s degree from an accredited institution, with a minimum cumulative GPA of 3.0 in undergraduate coursework. Application requirements include transcripts, three letters of recommendation, and a personal statement. Admission requirement for this program include TOEFL or IELTS scores for international applicants.

Financial Support:
Merit-based financial support is awarded based on a student’s admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Program Federal PLUS Loans, Alternative Loan Programs).
Facilities:
The Social Work department is located at 244 White Hall on the Syracuse University campus and provides faculty and student work space. In addition, the Social Work department offers field placement at any of the 200 social welfare, human services and health agencies from 27 counties in upstate New York.

The Marriage and Family Therapy department located at Peck Hall, 601 E. Genesee Street near main campus houses a newly renovated, state of the art, clinical training facility with 14 counseling rooms, observation rooms, and a digital recording system.

Transfer Credit:
The demands of this dual degree program may restrict your ability to transfer in courses from another MSW degree program. Please consult with the Social Work department directly to determine transfer credit eligibility.

Satisfactory Progress:
GPA of 3.0 or better & Pass Field Placement

Degree(s):
Students who complete all requirements will receive the dual Master in Social Work and a Master of Arts in Marriage and Family Therapy.

Students are required to complete all degree requirements as listed in the graduate course catalog for the Master of Social Work, and all degree requirements as listed in the graduate course catalog for the Master of Arts in Marriage and Family Therapy. Students will be required to complete the entire dual degree program before either degree is awarded.

Total Credits: 96

Degree Requirements
Students will choose one of the three sequence plans below. Variations in the chosen sequence plan is not recommended. Academic advising is required to alter the chosen program plan.

Sequence Plan I
SWK Start Regular/Full Time Program / 96 Credit Hours
Year 1 Fall
• SWK 601 - Fundamentals of Social Work Practice I 3 credit(s)
• SWK 671 - Field Instruction I 3 credit(s)
• SWK 626 - Persons in Social Context 3 credit(s)
• SWK 611 - Social Welfare Policy and Services 3 credit(s)
• SWK 662 - Applied Research in Social Work 3 credit(s)
Year 2 Fall
• SWK 672 - Field Instruction II 3 credit(s)
• SWK 628 - Human Diversity in Social Contexts 3 credit(s)
• SWK 730 - Family Systems Theory 3 credit(s)
• MFT 724 / SWK 724 - Psychopathology 3 credit(s)
Year 1 Summer Session 1
• MFT 681 - Marriage and Family Therapy Ethics and Issues 3 credit(s)
Year 1 Summer Session 2
• SWK 781 / MFT 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)
Year 2 Fall
• SWK 732 - Advanced Practice with Individuals, Families and Groups 3 credit(s)
• SWK 771 - Field Instruction III 3 credit(s)
• SWK 776 - Clinical Practice Evaluation 3 credit(s)
• MFT 750 - Introduction to Marriage & Family Therapy Practicum 3 credit(s)
• MFT 661 - Introduction to Family Therapy Practice 3 credit(s)
Year 2 Spring
• SWK 733 - Social Work Practice in Mental Health 3 credit(s)
• SWK 772 - Field Instruction IV 3 credit(s)
• MFT 760 - Practicum in Marriage and Family Therapy I 3 credit(s)
• MFT 682 - Marriage and Family Therapy Theory and Techniques 3 credit(s)
• SWK 671 - Mental Health Policy 3 credit(s)
Year 2 Summer Session 1
• MFT 567 - Sexual Issues for the Helping Professional 3 credit(s)
• MFT 662 - Systems Dynamics in a Group Setting 3 credit(s)
• MFT 761 - Practicum in Marriage & Family Therapy II 3 credit(s)
Year 2 Summer Session 2
• MFT 672 - Couple Therapy: Theory and Techniques 3 credit(s)
Year 3 Fall
• MFT 762 - Practicum in Marriage and Family Therapy III 3 credit(s)

MFT Elective
MFT Elective
Year 3 Spring
• MFT 684 - Family Therapy Perspectives on Cultural Diversity 3 credit(s)

**Students in Sequence I have the option of taking SWK 771 in 12 wk summer session followed by SWK 772 in Fall.

Sequence Plan II
MFT Start/Regular Full Time Program/ 96 Credit Hours
Year 1 Fall
• MFT 661 - Introduction to Family Therapy Practice 3 credit(s)
• MFT 750 - Introduction to Marriage & Family Therapy Practicum 3 credit(s)
• MFT 681 - Marriage and Family Therapy Ethics and Issues 3 credit(s)
• MFT Elective 1 MFT 671 - Introduction to Family Systems 3 credit(s)
• SWK 626 - Persons in Social Context 3 credit(s)
Year 1 Summer Session 1
• MFT 682 - Marriage and Family Therapy Theory and Techniques 3 credit(s)
• MFT 760 - Practicum in Marriage and Family Therapy I 3 credit(s)
• MFT 684 - Family Therapy Perspectives on Cultural Diversity 3 credit(s)
• MFT 688 - Family Therapy Across the Life Cycle 3 credit(s)
• SWK 662 - Applied Research in Social Work 3 credit(s)
Year 1 Summer Session 2
• MFT 661 - Introduction to Family Therapy Practice 3 credit(s)
• SWK 733 - Social Work Practice in Mental Health 3 credit(s)
• SWK 772 - Field Instruction IV 3 credit(s)
• MFT 760 - Practicum in Marriage and Family Therapy I 3 credit(s)
• MFT 682 - Marriage and Family Therapy Theory and Techniques 3 credit(s)
• SWK 671 - Mental Health Policy 3 credit(s)
Year 2 Fall
• MFT 567 - Sexual Issues for the Helping Professional 3 credit(s)
• MFT 662 - Systems Dynamics in a Group Setting 3 credit(s)
• MFT 761 - Practicum in Marriage & Family Therapy II 3 credit(s)
• SWK 724 / MFT 724 - Psychopathology 3 credit(s)
Year 2 Spring
• MFT 672 - Couple Therapy: Theory and Techniques 3 credit(s)

MFT Elective
MFT Elective
Year 2 Fall
• SWK 601 - Fundamentals of Social Work Practice I 3 credit(s)
• SWK 671 - Field Instruction I 3 credit(s)
• SWK 626 - Persons in Social Context 3 credit(s)
• SWK 611 - Social Welfare Policy and Services 3 credit(s)
• MFT 762 - Practicum in Marriage and Family Therapy III 3 credit(s)
Year 2 Spring
David B. Falk College of Sport and Human Dynamics

- SWK 602 - Fundamentals of Social Work Practice II 3 credit(s)
- SWK 672 - Field Instruction II 3 credit(s)
- SWK 628 - Human Diversity in Social Contexts 3 credit(s)
- SWK 730 - Family Systems Theory 3 credit(s)
- MFT 763 - Practicum in Marriage and Family Therapy IV 3 credit(s)

Year 2 Summer Session 1
- MFT 567 - Sexual Issues for the Helping Professional 3 credit(s)

Year 2 Summer Session 2
- SWK 781 / MFT 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)

MFT Elective 2

Year 3 Fall
- SWK 732 - Advanced Practice with Individuals, Families and Groups 3 credit(s)
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 776 - Clinical Practice Evaluation 3 credit(s)

Year 3 Spring
- SWK 733 - Social Work Practice in Mental Health 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- SWK 761 - Mental Health Policy 3 credit(s)

Sequence Plan III
Advanced Standing Full time Program 78 Credit Hours (eligible BSW graduates only)

Year 1 Summer
- SWK 730 - Family Systems Theory 3 credit(s)
- SWK 724 / MFT 724 - Psychopathology 3 credit(s)
- MFT 681 - Marriage and Family Therapy Ethics and Issues 3 credit(s)
- SWK 781 / MFT 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)

Year 1 Fall
- SWK 732 - Advanced Practice with Individuals, Families and Groups 3 credit(s)
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 776 - Clinical Practice Evaluation 3 credit(s)
- MFT 661 - Introduction to Family Therapy Practice 3 credit(s)
- MFT 750 - Introduction to Marriage & Family Therapy Practicum 3 credit(s)

Year 1 Spring
- SWK 733 - Social Work Practice in Mental Health 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- SWK 761 - Mental Health Policy 3 credit(s)
- MFT 682 - Marriage and Family Therapy Theory and Techniques 3 credit(s)
- MFT 760 - Practicum in Marriage and Family Therapy I 3 credit(s)

Year 2 Summer
- MFT 662 - Systems Dynamics in a Group Setting 3 credit(s)
- MFT 761 - Practicum in Marriage & Family Therapy II 3 credit(s)

SWK Elective

Year 2 Fall
- MFT Elective
- MFT 762 - Practicum in Marriage and Family Therapy III 3 credit(s)

Year 2 Spring
- MFT 684 - Family Therapy Perspectives on Cultural Diversity 3 credit(s)
- MFT 688 - Family Therapy Across the Life Cycle 3 credit(s)
- MFT 763 - Practicum in Marriage and Family Therapy IV 3 credit(s)
- MFT 997 - Master's Thesis or Project 0-6 credit(s)

Year 3 Summer
- MFT 567 - Sexual Issues for the Helping Professional 3 credit(s)
- MFT 672 - Couple Therapy: Theory and Techniques 3 credit(s)

Qualifying Electives for MFT Elective Requirement

- HTW 603 / MFT 603 - Introduction to Trauma Studies 3 credit(s)
- MFT 641 - Divorce Mediation 3 credit(s)
- MFT 642 - Therapy with LGBTQ Couples and Families 3 credit(s)
- MFT 643 - Family Therapy with Complex Trauma 3 credit(s)
- MFT 644 - Family Therapy with LGBTQ Youth 3 credit(s)
- MFT 645 - Queering Theory, History and Clinical Practice 3 credit(s)
- MFT 686 - Play Therapy with Children and Families 3 credit(s)
- MFT 687 - Spirituality in Therapy 3 credit(s)
- SWK 657 - Processes of Aging 3 credit(s)
- SWK 710 - Topics in Advanced Social Work Practice and Policy 1-6 credit(s)
- SWK 727 - Family Violence: Policy, Practice and Research 3 credit(s)
- SWK 737 - Strategies for Community Behavioral Health Practice 3 credit(s)
- SWK 739 - Applied Neuroscience in the Human Services 3 credit(s)
- SWK 742 - Violence, Bullying, & Trauma: Clinical Perspectives 3 credit(s)

Child Therapy, CAS

Contact:
Thom deLara, Department Chair and Professor of Practice,
Department of Marriage and Family Therapy
315-443-9830
tdelara@syr.edu

Faculty:
Deborah Coolhart, Thom deLara, Tracey Reichert Schimpff, Tracey Marchese, Dyane Watson, Ellen deLara, Melissa Luke, Derek Seward

Description:
The Certificate of Advanced Studies in Child Therapy is available for graduate students, clinicians, mental health professionals, and practitioners from allied disciplines who intend to expand their knowledge and skills in clinical practice with children and their families or caregivers. The proposed Certificate of Advanced Studies in Child Therapy is in keeping with the concerns expressed by state and federal agencies about the critical shortage of mental health professionals who are trained to address the needs of children, adolescents and their families.
Admission:
The Certificate of Advanced Studies in Child Therapy is restricted to baccalaureate prepared licensed/certified professionals, and students currently enrolled in master's level licensure qualifying programs. GRE's are not required. Psychopathology (or its equivalent) is required for completion of the Child Therapy CAS. Because Psychopathology is a required course in the SWK, MFT and MHC master's degree programs, it is not listed as a course in the Child Therapy CAS. However, applicants who previously completed a master's degree, and did not have Psychopathology in their course of study, must take a Psychopathology course in addition to the required 12 credits in the CAS. Completion of the Advanced Certificate in Child Therapy program alone does not qualify an individual for licensure as a social worker, marriage and family therapist, or any other profession licensed under Title VIII of the Education Law, nor does it authorize a certificate holder to engage in those scope-restricted professions.

Curriculum Requirements:
Three of the following courses:

- MFT 668 - Play Therapy with Children and Families 3 credit(s)
- COU 678 - Child Centered Play Therapy 3 credit(s)

One of:
- SWK 626 - Persons in Social Context 3 credit(s)
- MFT 688 - Family Therapy Across the Life Cycle 3 credit(s)
- COU 626 - Social and Cultural Dimensions of Counseling 3 credit(s)
- COU 645 - Counseling Prepracticum II: Advanced Multicultural Counseling Skills 3 credit(s)

Either
- MFT 643 - Family Therapy with Complex Trauma 3 credit(s)
- SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents 3 credit(s)

And one of the following courses:
- SWK 742 - Violence, Bullying, & Trauma: Clinical Perspectives 3 credit(s)
- SWK 709 - Practice with Children, Adolescents and Families 3 credit(s)
- MFT 644 - Family Therapy with LGBTQ Youth 3 credit(s)
- COU 672 - Counseling Children and Adolescents 3 credit(s)

Transfer Credit:
A maximum of three credits from a combination of transfer and/or external examinations/extra-institutional and experiential learning will be accepted toward a C.A.S.

Part-time Study:
Part-time study is allowed.

Satisfactory Progress:
Students must complete each course with a grade of B- or better and an overall GPA of 3.00 or better.

Trauma-Informed Practice, CAS

Contact:
Thom deLara, Department Chair, tdelara@syr.edu, 315-443-9830
Dept. of Marriage and Family Therapy
Peck Hall, 601 East Genesee Street

Faculty:
Dessa Bergen-Cico, Paul Caldwell, Deborah Coolhart, Kenneth Corvo, Ellen deLara, Thom deLara, Pamela Johnson, Tracey Marchese, Tracey Reichert Schimpff, Linda Stone Fish

Description:
The Certificate of Advanced Studies in Trauma-Informed Practice is structured for clinicians, mental health professionals, and practitioners from allied disciplines who intend to expand their knowledge and skills in the field of trauma response and intervention. The core courses, and elective options, address the theoretical foundations of trauma, as well as evidenced-based trauma-informed practice approaches and techniques. Please note, completion of the Advanced Certificate in Trauma-Informed Practice program alone does not qualify an individual for licensure as a social worker, marriage and family therapist, or any other profession licensed under Title VIII of the Education Law, nor does it authorize a certificate holder to engage in those scope-restricted professions.

Admission:
Completed bachelor's degree, minimum GPA of 3.4. Prefer experience in the field of trauma or enrollment in or completion of a master's degree in an allied field. GRE's are not required. An admissions committee consisting of members of MFT, SWK and PFN faculty will consider requests for exceptions to the admissions requirements. A completed bachelor's degree, minimum GPA of 3.4, or enrollment in or completion of a master's degree in an allied field is required. GRE's are not required.

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.

Financial Support
No financial aid is offered to students in the Trauma-informed CAS program.

Requirements
The curriculum includes three 3-credit courses, to be chosen from a group of five courses (Group A), and two 3-credit courses, to be chosen from a list of courses that include trauma-informed content (Group B). Students currently enrolled in a master's degree must take at least one of the courses in Group A outside their department.

Group A Courses (choose 3 courses from this group):
- MFT 603 - Introduction to Trauma Studies 3 credit(s)
- MFT 643 - Family Therapy with Complex Trauma 3 credit(s)
- SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents 3 credit(s)
- SWK 739 - Applied Neuroscience in the Human Services 3 credit(s)
- SWK 740 - Treatment of Complex Trauma with Individuals 3 credit(s)

Group B Courses (choose 2 courses from this course list):
- SWK 742 - Violence, Bullying, & Trauma: Clinical Perspectives 3 credit(s)
- MFT 668 - Play Therapy with Children and Families 3 credit(s)
- MFT 642 - Therapy with LGBTQ Couples and Families 3 credit(s)
- HTW 605 - Cognitive Behavioral Approaches to Stress Reduction 3 credit(s)
- HTW 618 - Alcohol, Other Drugs, Sex and

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Gambling: Dynamics of Addiction 3 credit(s)
  • MFT 724 - Psychopathology 3 credit(s)
  • MFT 687 - Spirituality in Therapy 3 credit(s)
  • MFT 773 - Family Violence: Theory and Therapy 3 credit(s)
  • SWK 727 - Family Violence: Policy, Practice and Research 3 credit(s)
  • SWK 682 - Introduction to Equine Assisted Activities and Therapies 3 credit(s)

Total Credits: 15
Certificate Awarded:
Certificate of Advanced Study

Transfer Credit:
Per University Rules and Regulations, a maximum of three credits from a combination of transfer and/or external examinations/extra-institutional and experiential learning will be accepted toward a C.A.S.

Satisfactory Progress:
Per University Rules and Regulations, graduate students must earn a minimum average of 3.0 for work comprising the program for the degree or certificate and a minimum cumulative GPA of 2.8.

Public Health, Food Studies and Nutrition
Department of Public Health, Food Studies and Nutrition
Rick Welsh, Department Chair
542 White Hall
315-443-4060
jwelsh@syr.edu

The Department of Public Health, Food Studies and Nutrition offers graduate academic programs in: Addiction Studies, MA; Food Studies, MS; Global Health, MS; Nutrition Science, MA, Nutrition Science, MS; Public Health, MS; Addiction Studies, CAS; Dietetic Internship Program, CAS; Food Studies, CAS; and Global Health, CAS.

Students' academic programs move outside of the classroom to gain hands-on experiences in their chosen field(s) of concentration. 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.

Graduate Programs

Food Studies
Anne Bellows, Food Studies Graduate Program Director
545 White Hall
443-4228
acbellow@syr.edu

Faculty
Anne Bellows, Mary Ann P. Kiernan, Laura-Anne Minkoff-Zern, Rick Welsh, Evan Weissman

Description
The graduate program in Food Studies offers a master of science in Food Studies and a certificate of advanced studies (CAS) in Food Studies.

The Masters of Science in Food Studies is a 36 credit hour, graduate program providing students with a foundation in the political economy of food systems, including human rights, food governance, and food justice and health. The M.S. degree program trains students for work in the fast-changing landscape of international food policy as well as national and local food governance systems, and additionally, prepares interested candidates for advanced graduate pursuits.

The CAS in Food Studies enhances students’ employment profile in food-related fields, opening employment opportunities in: local and national government work associated with food regulation and industry relations; NGO engagement in advocacy and policy associated with the human right to adequate food, food sovereignty, food and nutrition security, and trade and food-oriented labor; economic and social development work at the community, national, and international scales; food production and distribution companies, services, and vendors in established or start-up modes.

Nutrition Science and Dietetics
Lynn Brann, Director of Graduate Programs in Nutrition
559 White Hall
315-443-5573
lbrann@syr.edu

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

Dietetic Program Director Nancy Rindfuss, 315-443-2386
Dietetic Internship Director Debra Z. Connolly, 315-443-2386

Description
Graduate students in the Nutrition Science program acquire a balanced background in the theory and application of the science of nutrition. Specialization is desirable and is achieved by appropriate course selection, readings, independent study, field experience, and research projects. Faculty members have expertise in clinical nutrition, community nutrition, nutrition for growth and development, nutrition education, nutrition science, and food service management.

The department is affiliated with a number of local hospitals, clinics, and community agencies that provide special learning and research experiences for students according to their background and interests.

Public Health
Brooks Gump, Director of Graduate Programs in Public Health
344 White Hall
315-443-2208
bbgump@syr.edu

Faculty
Dessa Bergen-Cico, James Byrne, Luvenia W. Cowart, Brooks Gump, Ignatius Ijere, Brittany Ktnsh, Sandra D. Lane, Eileen Lantier, David Larsen, Katherine McDonald, Mary Ann Middlemiss, Lutchmie Narine, Lisa Olson-Gugerty, Arthur Owora, Maureen Thompson

Description
The Public Health program offers advanced certificates in Addictions Studies and Global Health, a master of arts in Addiction Studies and a master of science in Global Health.

The 24 credit hour Addiction Studies, CAS is available only to Syracuse University students dually enrolled in the following programs:
  • M.S. Clinical Mental Health Counseling (School of Education)
  • Ph.D. Counseling and Counselor Education (School of Education)
  • M.A. Marriage and Family Therapy (Falk College)
  • M.S.W. Social Work (Falk College)

The CAS in Addiction Studies provides an intensive concentration of coursework on the biology, psychology and cross-cultural sociology of addictions as a supplement to a graduate program of study.

The Global Health, CAS is a 19-credit hour graduate program providing students applied skills in global health policy and practice. The program emphasizes the integration of social and behavioral determinants of health combined with practice and evidence-based strategies for developing, implementing, and evaluating
programs and policies in global settings.

The 36 credit Addiction Studies, MA provides students with opportunities to develop broad competencies in preparation for employment in a number of fields addressing alcohol, other drugs and behavioral (process) addictions. Students will be exposed to a public health perspective of substance use and addictive behaviors specializing in prevention and counseling.

The 36 credit graduate program in Global Health, MSMS is designed to provide students with core knowledge, research, and practice skills necessary for the advancement of evidence-based global health. Applied competencies are acquired in relevant coursework, culminating in an international practicum placement and capstone project.

The MS in Public Health is a 42 credit hour program designed to provide students with core knowledge and research skills necessary for the advancement of evidence-based public health. Within the MSPH, there are two tracks. The Global Health track introduces students to health issues in the context of the global community providing students with exposure to theory, research and applications in both the US and international settings. The Biostatistics track provides students with training in both introductory and advanced biostatistics - applying multiple different analytic methods to the analysis of public health data.

Addiction Studies, MA

Contact:
Brooks B. Gump, Director of Graduate Programs in Public Health;
Department of Public Health, Food Studies, and Nutrition
344 White Hall
315-443-2208
bbgump@syr.edu

Core Faculty:
Dessa Bergen-Cico, James Byrne, Brooks B. Gump, Ignatius Ijere, Susan Scholl

Description:
The 36 credit Master of Arts in Addiction Studies provides students with opportunities to develop broad competencies in preparation for employment in a number of fields addressing alcohol, other drugs and behavioral (process) addictions. Students will be exposed to a public health perspective of substance use and addictive behaviors specializing in prevention and counseling. Requirements include: 1) 25 credits of Theoretical Foundations, 2) 8 credits of Research and Assessment, 3) 3 credits of Elective, 4) Qualifying Examination and 5) a Master's Paper.

Upon completion of the program, students will have met the New York State Office of Alcoholism and Substance Abuse Services (OASAS) education training requirements for initial certification as a Certified Prevention Professional (CPP) and Certified Alcohol and Substance Abuse Counselor (CASAC); and be eligible to sit for the CPP/CPS certification exam. Full certification as a CPP or CASAC requires supervised post-graduate work experience before full certification is awarded by OASAS. Students seeking credentialing in states other than New York must contact the specific credentialing office for that state.

Admission:
Requirements for this program include:
undergraduate degree with a minimum cumulative 3.0 GPA, minimum score of 100 on the TOEFL (for international applications), undergraduate transcripts, three letters of recommendation, a resume and personal statement, and GRE scores. However, GRE’s are not required for students who have already completed a different advanced degree (e.g., MS, PhD, MD). An admissions committee consisting of full time faculty members who teach in the MA Addictions Studies program will consider requests for admission.

Transfer Credit:
Students may transfer up to 9 credits. Substituted/transferred course work should cover material equivalent to that which is covered in the relevant required course. Substitution/transfer requests will need to be approved by the graduate committee for public health programs. All students are expected to file a tentative program of study in their second semester. Students transferring courses from another institution must file a program of study prior to completing 12 credits at Syracuse University.

Food Studies, MS

Contact:
Anne Bellows
Graduate Program Director Food Studies
545 White Hall
315-443-4228
acbellow@syr.edu

Core Faculty:
Anne Bellows, Laura-Anne Minkoff-Zern, Rick Welsh, Evan Weissman

Description:
The 36 hour M.S. in Food Studies offers graduate students an interdisciplinary and holistic approach to food systems, food economies, and sustainable livelihoods and environments that influence public health and nutrition outcomes and overall well-being. The core focuses on multi-scale interpretations of the political economy of the food system, human rights to adequate food, as well as transnational food movements and related public policy. The MS in Food Studies complements student interest in other areas including economic and social development, public health, agriculture and food policy, civil rights, effective organizational
communication strategies, and entrepreneurship, among others. Upon completion of the program, graduates will be prepared to bring substantive knowledge and analytical skills to engage in employment at food-oriented organizations of all types or continue with graduate or professional studies.

Admission:
A Bachelor's Degree from an accredited college or university with a graduating GPA of 3.0 or higher, minimum score of 100 on the TOEFL (for international applications), undergraduate transcripts, three letters of recommendation, a resume and personal statement, and GRE scores. However, GRE's are not required for students who have already completed a different advanced degree (e.g. MS, PhD, JD). Additionally, students must have taken an undergraduate class in social science research methods and an upper division food studies class or take these courses at Syracuse University for no graduate credit. Students from broad inclusive fields of undergraduate study and work experience will be considered for admission. Exceptions to the university requirements will be reviewed on a case-by-case basis by the Food Studies Graduate Admissions Committee, to be made up of three members of the Food Studies Program.

Transfer Credit:
Students may transfer up to 30% of credits. Substituted/transferred course work should cover material equivalent to that which is covered in the relevant required course. Substitution/transfer requests will need to be approved by the graduate committee for Food Studies programs. All students are expected to file a tentative program of study in their second semester. Students transferring courses from another institution must file a program of study prior to completing 12 credits at Syracuse University.

Satisfactory Progress:
Certification for an advanced degree at Syracuse University requires a minimum average of 3.0 for work comprising the program for the degree and a 2.8 average for all credits earned.

Core Courses:
15 Credits Required
- FST 601 - Seminar in Food Studies and Systems 3 credit(s)
- FST 603 - The Human Right to Adequate Food and Nutrition 3 credit(s)
- FST 604 - Food Studies Research Methods 3 credit(s)
- FST 702 - Political Economy of Food 3 credit(s)
- FST 703 - Transnational Food, Health and the Environment 3 credit(s)

Final Project:
(6 credits maximum for Thesis; 3 credits for Practicum)
- FST 797 - Practicum in Food Studies and Systems 3 credit(s)
- FST 997 - Masters Thesis 1-6 credit(s)

Research and Evaluation Methods
3 Credits
To be selected in consultation with faculty advisor
- HTW 621 - Research Methods in Public Health 3 credit(s)
- HTW 668 - Applied Epidemiology in Global Health 3 credit(s)
- CFS 621 - Statistical Concepts I 3 credit(s)
- SWK 775 - Program Evaluation 3 credit(s) or HTW 661 - Development and Evaluation of Global Health Programs 3 credit(s)
- SOC 614 - Introduction to Qualitative Research 3 credit(s)
- GEO 685 - Community Geography 3 credit(s)

Directed Electives:
12-15 credits, depending on Final Project credits*
- FST 621 - Morality of a Meal:Food Ethics 3 credit(s)
- FST 706 - Gender, Food, Rights 3 credit(s)
- HTW 669 - Disability and Global Health 3 credit(s)
- HTW 706 - Environmental Epidemiology 3 credit(s)
- NSD 627 - Public Health Nutrition 3 credit(s)
- NSD 756 - Food and Public Policy 3 credit(s)
- PAI 730 - Problems in Public Administration 1-3 credit(s)
- GEO 755 - Seminar in Political Ecology 3 credit(s)

*Additional choices may be selected from the research and evaluation methods courses listed above.

Global Health, MS

Contact:
Brooks B. Gump, Director of Graduate Programs in Public Health
344H White Hall
315-443-2208
bbgump@syr.edu

Core Faculty

Brooks B. Gump, Brittany Kmush, Sandra D. Lane, David Larsen, Katherine McDonald, Lutchmie Narine, Lisa Olson-Gugerty, Arthur Owora

Affiliated Faculty
Annie Bellows, Tanya M. Horacek, Sudha Raj, Robert A. Rubenstein, Cecelia VanHollen, Rick Welsh

Program Description
The Master of Science in Global Health is a 36 credit hour graduate program designed to provide students with core knowledge, research, and practice skills necessary for the advancement of evidence-based global health. Applied competencies are acquired in relevant coursework, culminating in an international practicum placement and capstone project.

Admissions
A Bachelor's Degree from an accredited college or university with a graduating GPA of 3.2. Students from broad inclusive fields of undergraduate study and work experience will be considered for admission. GRE scores and a personal statement are required for admission. A minimum TOEFL score of 100 is required for admission.

Financial Support
Limited financial aid is available in the form of graduate assistantships and scholarship credits. Financial aid is determined on the basis of merit.

Transfer Credit
The public health program will accept a maximum of 9 credits in transfer for courses in which (1) the grade earned was at least a B and (2) the course is evaluated as equivalent to the required course in the program for which it will substitute.

Part-Time Study
Program may be pursued on a part-time basis with department approval.

Satisfactory Progress
Certification for an advanced degree at Syracuse University requires a minimum average of 3.0 for work comprising the program for the degree and a 2.8 average for all credits earned.

Required Courses
Global Health Core (15 credits)
- HTW 661 - Development and Evaluation of Global Health Programs 3 credit(s)
- HTW 664 - Social & Behavioral Determinants in Global Health 3 credit(s)
- PAI 665 / HTW 665 - Applied Global Health Practice and Policy 3 credit(s)
Program Description
The master's degree represents the professional qualification for many practitioners in dietetics and community nutrition and hence has become the terminal degree for many students. However, the increased number of higher education programs in nutrition and dietetics has also increased interest in doctoral programs that prepare practitioners for faculty positions. The master's degree may thus serve as a preparatory step toward more advanced study.

Because of the varying backgrounds and professional interests of students, the master's degree program is flexible. The M.A. degree requires the completion of a minimum of 36 credits, and the M.S. degree requires the completion of a minimum of 30 credits including a thesis.

The thesis involves investigative work on a specific topic, extensive examination and interpretation of nutrition literature on that topic, and the presentation of results in a clear and logical form. Completion of the thesis may require an additional year of study beyond completion of coursework.

Students completing the Didactic Program in Dietetics or DPD requirements (to be eligible to apply to a dietetic internship) will require a minimum of 40 credits.

General Program Requirements
Students selecting nutrition as a major field of study must have minimum proficiency in chemistry and physiology. A recent course in nutrition must be presented upon entrance.

If you have a bachelor's degree outside nutrition and would like to become a registered dietitian, make an appointment with the director of the Didactic Program in Dietetics (DPD), Nancy Rindfuss, M.A., R.D., to obtain an evaluation of your DPD status. The evaluation might dictate classes you have to complete prior to starting the program.

Both the M.A. and M.S. degrees should include coursework from the major area and supporting areas.

Major Area Courses
Students are expected to complete all of the core courses, with a grade of B or higher.

Core Courses (15 credits)
- NSD 555 - Food, Culture and Environment 3 credit(s)
- NSD 654 - Nutrition Research Methods 3 credit(s)
- NSD 665 - Metabolism of Micronutrients 3 credit(s)
- NSD 666 - Metabolism 3 credit(s)
- NSD 695 - Nutritional Status Evaluation 3 credit(s)

Courses of Special Interest (0-9 credits)
- NSD 511 - Nutrition Education 3 credit(s)
- NSD 512 - Nutrition Counseling 3 credit(s)
- NSD 648 - Dietetics Practice Across the Lifespan 3 credit(s)
- NSD 681 - Medical Nutrition Therapy I 3 credit(s) and
- NSD 682 - Medical Nutrition Therapy I Lab 1 credit(s)
- NSD 683 - Medical Nutrition Therapy II 3 credit(s) and
- NSD 684 - Medical Nutrition Therapy II Lab 1 credit(s)
- NSD 755 - Field Experience in Community Nutrition 3 credit(s)

Other Nutrition Courses (0-9 credits)
- NSD 647 - Weight Management, Obesity and Disordered Eating 3 credit(s)
- NSD 655 - Issues in Community Nutrition 3 credit(s)
- NSD 658 - Participatory Program Planning 3 credit(s)
- NSD 660 - Readings in Nutrition 1-3 credit(s)
- NSD 670 - Experience Credit 1-6 credit(s)
- NSD 680 - Seminar in Food and Nutrition 1-3 credit(s)
- NSD 690 - Independent Study 1-6 credit(s)
- NSD 755 - Field Experience in Community Nutrition 3 credit(s)
- NSD 756 - Food and Public Policy 3 credit(s)
- NSD 765 - Problems in Human Metabolism 3 credit(s)

Supporting Area Courses
6 to 18 credits may be selected from any field(s) approved by the student's advisor as being supportive of the total program. The program of study must be approved by the department's graduate committee.

Transfer Credits
Students may transfer 30% of the required graduate credit hours (with a grade of B or higher) with the approval of the graduate committee. A maximum of 12 credits (with a grade of B or higher) may be taken as a non-matriculated student at Syracuse University.

Comprehensive Examination
The comprehensive examination for both the M.A. and M.S. degrees consists of an essay test on advanced topics in nutrition and an oral examination. Master's students are required to
complete the Master's comprehensive Examination as part of their master's degree and must pass this in order to receive their degree. The Master's Comprehensive Examination is given to candidates who are in the final stages of completing all requirements for the master's degree. This examination provides the master's candidate an opportunity to demonstrate his/her capabilities for critical analysis and thinking and assimilation of information contained in the body of nutrition literature. The exam is a take home exam. It will be given to students in early March of their final year of study; students will be given two weeks to complete the exam and prepare a 15 minute oral presentation to be presented to the faculty as the oral exam on a specified date toward the end of the semester.

If the student fails to pass the Comprehensive Exam, they will be given a second chance to complete it. Failure to pass the second time will result in suspension from the Nutrition Science Graduate Program.

**Nutrition Science, MS**

**Contact**
Lynn Brann, Director of Graduate Programs in Nutrition
559 White Hall
315-443-4805
lbrann@syr.edu

**Faculty**
Kay Steams Bruening, Lynn S. Brann, L. Beth Dixon, Tanya M. Horacek, Sudha Raj, Sarah H. Short, Jane Burrell Uzcategui, Margaret A. Voss, Jennifer L. Wilkins

**Program Description**
The master's degree represents the professional qualification for many practitioners in dietetics and community nutrition and hence has become the terminal degree for many students. However, the increased number of higher education programs in nutrition and dietetics has also increased interest in doctoral programs that prepare practitioners for faculty positions. The master's degree may thus serve as a preparatory step toward more advanced study.

Because of the varying backgrounds and professional interests of students, the master's degree program is flexible. The M.A. degree requires the completion of a minimum of 36 credits, and the M.S. degree requires the completion of a minimum of 30 credits including a thesis. The thesis involves investigative work on a specific topic, extensive examination and interpretation of nutrition literature on that topic, and the presentation of results in a clear and logical form. Completion of the thesis may require an additional year of study beyond completion of coursework. Students completing the Didactic Program in Dietetics or DPD requirements (to be eligible to apply to a dietetic internship) will require a minimum of 40 credits.

**General Program Requirements**
Students selecting nutrition as a major field of study must have minimum proficiency in chemistry and biology. A recent course in nutrition must be presented upon entrance.

If you have a bachelor's degree outside nutrition and would like to become a registered dietitian, make an appointment with the director of the Didactic Program in Dietetics (DPD), Nancy Rindfus, M.A., R.D., to obtain an evaluation of your DPD status. The evaluation might dictate classes you have to complete prior to starting the program.

Both the M.A. and M.S. degrees should include coursework from the major area and supporting areas.

**Major Area Courses**
Students are expected to complete all of the core courses, with a grade of B or higher.

**Core Courses (15 credits)**
- NSD 555 - Food, Culture and Environment 3 credit(s)
- NSD 654 - Nutrition Research Methods 3 credit(s)
- NSD 665 - Metabolism of Micronutrients 3 credit(s)
- NSD 666 - Metabolism 3 credit(s)
- NSD 695 - Nutritional Status Evaluation 3 credit(s)

**Courses of Special Interest (0-9 credits)**
- NSD 511 - Nutrition Education 3 credit(s)
- NSD 512 - Nutrition Counseling 3 credit(s)
- NSD 648 - Dietetics Practice Across the Lifespan 3 credit(s)
- NSD 681 - Medical Nutrition Therapy I 3 credit(s) and
- NSD 682 - Medical Nutrition Therapy I Lab 1 credit(s)
- NSD 683 - Medical Nutrition Therapy II 3 credit(s) and
- NSD 684 - Medical Nutrition Therapy II Lab 1 credit(s)
- NSD 755 - Field Experience in Community Nutrition 3 credit(s)

**Other Nutrition Courses (0-9 credits)**
- NSD 647 - Weight Management, Obesity and Disordered Eating 3 credit(s)
- NSD 655 - Issues in Community Nutrition 3 credit(s)
- NSD 658 - Participatory Program Planning 3 credit(s)
- NSD 660 - Readings in Nutrition 1-3 credit(s)
- NSD 670 - Experience Credit 1-6 credit(s)
- NSD 680 - Seminar in Food and Nutrition 1-3 credit(s)
- NSD 690 - Independent Study 1-6 credit(s)
- NSD 755 - Field Experience in Community Nutrition 3 credit(s)
- NSD 756 - Food and Public Policy 3 credit(s)
- NSD 765 - Problems in Human Metabolism 3 credit(s)

**Supporting Area Courses**
6 to 18 credits may be selected from any field(s) approved by the student's advisor as being supportive of the total program. The program of study must be approved by the department's graduate committee.

**Thesis**
The thesis should be selected in a specific area of interest that is reflected by the selection of courses within the major and related fields. Students should register for six credits of NSD 997 - Master's Thesis. A written proposal for the thesis must be presented to the department for approval. Oral defense of the thesis is required.

**Transfer Credits**
Students may transfer 30% of the required graduate credit hours (with a grade of B or higher) with the approval of the graduate committee. A maximum of 12 credits (with a grade of B or higher) may be taken as a non-matriculated student at Syracuse University.

**Comprehensive Examination**
The comprehensive examination for both the M.A. and M.S. degrees consists of an essay test on advanced topics in nutrition and an oral examination.

Master's students are required to complete the Master's Comprehensive Examination as part of their master's degree and must pass this in order to receive their degree. The Master's Comprehensive Examination is given to candidates who are in the final stages of completing all requirements for the master's degree. This examination provides the master's candidate an opportunity to demonstrate his/her capabilities for critical analysis and thinking and assimilation of information contained in the body of nutrition literature. The exam is a take home exam. It will be given to students in early March of their final year of study; students will be given two weeks to complete the exam and prepare a 15 minute oral presentation to be presented to the faculty as the oral exam on a specified date toward the end of the semester.
Limited financial aid is available in the form of graduate assistantships and scholarship credits. Financial aid is determined on the basis of merit.

Requirements

Public Health Core (15 credits)

• HTW 661 - Development and Evaluation of Global Health Programs 3 credit(s)
• HTW 664 - Social & Behavioral Determinants in Global Health 3 credit(s)
• HTW 665 - Applied Global Health Practice and Policy 3 credit(s)
• HTW 668 - Applied Epidemiology in Global Health 3 credit(s)
• HTW 706 - Environmental Epidemiology 3 credit(s)

Research and Statistics Core (15 credits)

Required: (12 credits)

• HTW 621 - Research Methods in Public Health 3 credit(s)
• HTW 622 - Research Proposal Development 2 credit(s)
• HTW 623 - Ethical Issues in Public Health, Food and Nutrition Research 1 credit(s)
• HTW 630 - Introductory Biostatistics 3 credit(s)
• HTW 997 - Master’s Thesis 3 credit(s)

Choose 1 from the following (3 credits):

• HTW 631 - Intermediate Biostatistics 3 credit(s) *
• GEO 683 - Geographic Information Systems 3-4 credit(s)
• SOC 614 - Introduction to Qualitative Research 3 credit(s)
• HTW 704 - Epidemiology of Modern Plagues 3 credit(s)

*This course is an option here only for those planning on a Global Health track - it is included as required course for Biostatistics track (see below).

Global Health Track

Required (3 credits):

• HTW 663 - Global Health 3 credit(s)

Choose 3 courses from the following (9 credits):

• HTW 621 - Research Methods in Public Health 3 credit(s)
• HTW 622 - Research Proposal Development 2 credit(s)
• HTW 623 - Ethical Issues in Public Health, Food and Nutrition Research 1 credit(s)
• HTW 630 - Introductory Biostatistics 3 credit(s)
• HTW 661 - Development and Evaluation of Global Health Programs 3 credit(s)
• HTW 664 - Social & Behavioral Determinants in Global Health 3 credit(s)
• HTW 665 - Applied Global Health Practice and Policy 3 credit(s)
• HTW 668 - Applied Epidemiology in Global Health 3 credit(s)
• HTW 706 - Environmental Epidemiology 3 credit(s)

Biostatistics Track

Required (6 credits):

• HTW 631 - Intermediate Biostatistics 3 credit(s)
• HTW 632 - Advanced Biostatistics 3 credit(s)

Choose 2 courses from the following (6 credits):

• HTW 633 - Spatial statistics for public health 3 credit(s)
• GEO 683 - Geographic Information Systems 3-4 credit(s)
• GEO 685 - Community Geography 3 credit(s)
• GEO 687 - Environmental Geostatistics 3 credit(s)

Transfer Credit:

The public health program will accept a maximum of 9 credits in transfer for courses in which (1) the grade earned was at least a B and (2) the course is evaluated as equivalent to the required course in the program for which it will substitute.

Part-time Study:

Program may be pursued on a part-time basis with department approval.

Satisfactory Progress:

Certification for an advanced degree at Syracuse University requires a minimum average of 3.0 for work comprising the program for the degree and a 2.8 average for all credits earned.

Nutrition Science, PhD

Note:

The Ph.D. program provides an opportunity for
systematic study of various aspects of human nutrition and methods for evaluation and dissemination of nutrition information. Individual programs are planned to include supporting courses in other fields that provide the basis for understanding the complex physiological, environmental, psychosocial, economic, and cultural factors that influence human nutritional needs as well as the means and methods of studying them.

This program prepares professional nutritionists for college teaching and administrative positions that require understanding or application of advanced knowledge of nutrition and communication with professionals in related fields.

Program Requirements
Completion of the degree requires 78 credits, including a minimum of 30 credits in nutrition, 15 to 30 credits in supporting areas, and 18 dissertation credits. The student’s program of study must be approved by the department.

All students must pass a written qualifying examination, which covers a broad basic area of knowledge of nutrition and foods. The exam can be taken after one year of graduate study in the department, but must be taken before the completion of more than 36 credits. Formal acceptance into the Ph.D. program is contingent upon successful completion of the exam.

Research Tools
Competence must be achieved in at least two tools of research, including statistics (two appropriate courses or equivalent knowledge). The second tool may be chosen from those areas most appropriate to the student’s proposed doctoral research, including research methods, computer use, or foreign languages.

Comprehensive Examination
A comprehensive examination, which includes both written and oral components, is taken after the student has completed the minimum course requirement of 60 credits.

Dissertation
A dissertation proposal should be submitted to the department no later than one year prior to the expected date of completion of the program. The dissertation and its defense must be completed in accordance with the requirements of the Graduate School and the department.

Addiction Studies, CAS
Contact
Brooks B. Gump, Director of Graduate Programs in Public Health
344H White Hall
315-443-2208

bbgump@syr.edu

Faculty
Dessa Bergen-Cico, James Byrne, Brooks Gump, Ignatius Ijere, Susan Scholl

Description
The 24 credit hour Certificate of Advanced Studies (CAS) in Addiction Studies provides an intensive concentration of coursework on the biology, psychology and cross-cultural sociology of addictions for students enrolled in the following Syracuse University graduate programs:

- M.S. Clinical Mental Health Counseling (School of Education)
- Ph.D. Counseling and Counselor Education (School of Education)
- M.A. Marriage and Family Therapy (Falk College)
- M.S.W. Social Work (Falk College)

The CAS in Addiction Studies addresses one of society’s major problems and provides students with opportunities to develop competencies in preparation for employment in a number of fields dealing with substance abuse, gambling, and related behavioral addictions. Students are exposed to broad perspectives in the addictions field through the core curriculum, and may subsequently apply their courses toward their professional fields to expand employment and placement opportunities. According to the U.S. Bureau of Labor Statistics, substance abuse and behavioral disorder counselors are one of the fastest-growing fields of practice today. Upon completion of the Addiction Studies Certificate of Advanced Studies, students will have met the educational training requirements for initial certification as a New York State Office of Alcoholism and Substance Abuse Services (OASAS) Credentialed Alcoholism and Substance Abuse Counselor (CASAC) and CASAC in Training (CASAC-T).

Note that certification as a CASAC is a NY State credential managed by OASAS, not Syracuse University. In addition to the education requirements met by our Addiction Studies Program OASAS requires 2,000 hours (~1 year full time) supervised work experience for CASAC exam eligibility.

Admissions Requirement
Internal applications only accepted from the following SU programs: M.S. Clinical Mental Health Counseling (School of Education); Ph.D. Counseling and Counselor Education (School of Education); M.A. Marriage and Family Therapy (Falk College); M.S.W. Social Work (Falk College). Requirements include matriculated status in one of the Syracuse University graduate programs named above, official transcript, personal statement and 2 letters of recommendation (one of which must be an academic reference; the other may be a professional reference).

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.

Transfer Credits
A maximum of three credits from a combination of transfer and/or external examinations/extra-institutional and experiential learning will be accepted toward a C.A.S.

Satisfactory Progress
Per University Rules and regulations, graduate students must earn a minimum average of 3.0 for work comprising the program for the degree or certificate and minimum cumulative GPA of 2.8.

Required Courses (12 credits)

- HTW 618 - Alcohol, Other Drugs, Sex and Gambling: Dynamics of Addiction 3 credit(s)
- HTW 606 - Clinical Evaluation and Assessment of Addictions 3 credit(s)
- HTW 609 - The Impact of Addictions on Families and Relationships 3 credit(s)
- HTW 610 - Addictions Treatment Planning and Referral 3 credit(s)

Choose 1 From This Category

List (3 credits)

- HTW 608 - Addictions in Cultural Context 3 credit(s)
- HTW 612 - Global Perspectives in Alcohol & Other Drug Policies 3 credit(s)
- COU 675 - Substance Abuse Counseling 3 credit(s)
- SWK 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)

Choose 1 From This Category

List (3 credits)

- SWK 628 - Human Diversity in Social Contexts 3 credit(s)
- MFT 684 - Family Therapy Perspectives on Cultural Diversity 3 credit(s)
- COU 626 - Social and Cultural Dimensions of Counseling 3 credit(s)
- HTW 605 - Cognitive Behavioral Approaches to Stress Reduction 3 credit(s)

Choose 1 From This Category

List (3 credits)

- MFT 724 - Psychopathology 3 credit(s)
- HTW 607 - Motivational Interviewing for Behavioral Change 3 credit(s)

Choose 1 From This Category

List (3 credits)

- CHS 711 - Smoking Cessation 3 credit(s)
- MFT 710 - Addiction Counseling 3 credit(s)
- HTW 625 - Addictions Treatment Planning and Referral 3 credit(s)

Choose 1 From This Category

List (3 credits)

- HTW 609 - The Impact of Addictions on Families and Relationships 3 credit(s)
- HTW 608 - Addictions in Cultural Context 3 credit(s)
- HTW 625 - Addictions Treatment Planning and Referral 3 credit(s)

Choose 1 From This Category

List (3 credits)

- HTW 610 - Addictions Treatment Planning and Referral 3 credit(s)
- HTW 609 - The Impact of Addictions on Families and Relationships 3 credit(s)
- HTW 608 - Addictions in Cultural Context 3 credit(s)

Choose 1 From This Category

List (3 credits)

- HTW 609 - The Impact of Addictions on Families and Relationships 3 credit(s)
- HTW 608 - Addictions in Cultural Context 3 credit(s)
- HTW 605 - Cognitive Behavioral Approaches to Stress Reduction 3 credit(s)

Choose 1 From This Category

List (3 credits)

- HTW 605 - Cognitive Behavioral Approaches to Stress Reduction 3 credit(s)
- HTW 607 - Motivational Interviewing for Behavioral Change 3 credit(s)
- HTW 608 - Addictions in Cultural Context 3 credit(s)
List (3 credits)

- HTW 636 - Ethics in Addiction Services 3 credit(s)
- MFT 681 - Marriage and Family Therapy Ethics and Issues 3 credit(s)

Dietetic Internship Program, CAS

Contact:
Debra Connolly, Director, Dietetic Internship Program
550 White Hall
Syracuse, NY 13244
Phone: (315) 443-2386
e-mail: dzconnol@syr.edu

Certificate Requirements

The 13 credit hour Dietetic Internship Certificate of Advanced Study (C.A.S.) is a dietetic internship program that can be pursued with or without a graduate degree.

The internship program supports students as they prepare for careers as entry-level dietitians. It builds on academic skills acquired in an accredited didactic program in dietetics. The internship consists of 1200-hours of supervised practice focusing on the nutrition care process as it applies to communities, families, acute care, long term care, outpatient programs and feeding programs. It includes a concentration focusing on outcomes research, and management.

Upon completion of the program, graduates are eligible to take the registration examination for dietitians offered through the Commission on Dietetics Registration (CDR). Successful completion of the RD exam is usually a prerequisite for state licensure or certification.

The internship is based on the current standards of Accreditation Council for Education in Nutrition and Dietetics (ACEND) (120 S. Riverside Plaza, Suite 2000, Chicago, IL 60606; 312-879-0040; ext. 5400).

Transfer Credit

A maximum of three credits from a combination of transfer and/ or external examinations/ extra-institutional and experiential learning will be accepted toward a C.A.S.

Program Requirements

- NSD 515 - Physical Assessment and Multiskilling for Dietitians 1 credit(s)
- NSD 650 - Dietetics Practicum 1-6 credit(s) (6 credits required)
- NSD 680 - Seminar in Food and Nutrition 1-3 credit(s) (3 credits required)
- NSD 658 - Participatory Program Planning 3 credit(s)

Food Studies, CAS

Contact:
Anne Bellows
Graduate Program Director Food Studies
545 White Hall
315-443-4228
acbellow@syr.edu

Core Faculty:
Anne Bellows, Rick Welsh, Evan Weissman, Laura-Anne Minkoff-Zern

Affiliated Faculty:
Jennifer Wilkins, L. Beth Dixon, Katherine McDonald

Description:
The academic field of Food Studies trains students in the fast-changing landscape of international food policy as well as local food governance systems. The program at Syracuse University is characterized by the study of structural conditions of inequalities, injustices and imbalances in the food system, combined with learning the levers of social change, including social movements, public policy, and equitably organized food and nutrition economies. Students learn how the local and global articulate with each other under diverse circumstances like climate change, trade rules, or nutrition policy and humanitarian/ charity assistance.

The graduate level C.A.S. in Food Studies enhances students’ employment profile in food-related fields, opening employment opportunities in: local and national government work associated with food regulation and industry relations; NGO engagement in advocacy and policy associated with the human right to adequate food, food sovereignty, food and nutrition security, and trade and food-oriented labor; economic and social development work at the community, national, and international scales; food production and distribution companies, services, and vendors in established or start-up modes.

Food Studies is an interdisciplinary field that has great relevance across traditional academic departments. Students with a C.A.S. in Food Studies will also be well prepared for advanced graduate work that focuses on food studies and systems related questions that are being asked throughout the academy.

Admission:
Students from broad inclusive fields of undergraduate study and work experience will be considered for admission. A bachelor’s degree from an accredited college or university, with a cumulative GPA of 3.0 is required. The admissions process for this program will require a college transcript, a personal statement regarding interest in CAS in Food Studies and how it will fit in with student’s career plans, and one letter of recommendation. GREs are not required for admission into this program. Students do not need to be enrolled in a graduate program or have a graduate degree for this Certificate of Advanced Studies (CAS) in Food Studies.

C.A.S. Program Requirements:

C.A.S. students should begin with the required FST 601 Seminar in Food Studies and Systems and then select courses in consultation with the C.A.S. Program Director or Faculty Adviser in Food Studies.

Required Introductory Graduate Course (3 credits):
- FST 601 - Seminar in Food Studies and Systems 3 credit(s)

Required (minimum of 2 classes; 6 credits)
- FST 603 - The Human Right to Adequate Food and Nutrition 3 credit(s)
- FST 604 - Food Studies Research Methods 3 credit(s)
- FST 702 - Political Economy of Food 3 credit(s)
- FST 703 - Transnational Food, Health and the Environment 3 credit(s)
- FST 706 - Gender, Food, Rights 3 credit(s)

Required Additional Course (3 credits):

Selected either from Food Studies graduate courses not already taken from the list above or from the list of directed electives below from outside the Food Studies program.
- NSD 627 - Public Health Nutrition 3 credit(s)
- NSD 756 - Food and Policy 3 credit(s)
- HTW 669 - Disability and Global Health 3 credit(s)
- PAI 700 - Selected Topics 1-6 credit(s) *
- GEO 685 - Community Geography 3 credit(s)
- GEO 755 - Seminar in Political Ecology 3 credit(s) **
- LSA 670 Thematic Landscape Design Studio ***

*Note:
*PAI 700 is a relevant directed elective when its focus is on food security.
**GEO 755 focuses on food and agriculture case studies.
Admissions Requirements

Applicants must have earned a bachelor's degree from an accredited institution, with a minimum cumulative GPA of 3.0 in undergraduate coursework. Requirements include an official transcript, personal statement and 2 letters of recommendation (one of which must be an academic reference; the other may be a professional reference).

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.

Transfer Credit:
Students may transfer up to a total of 3 credit hours. Substituted/transferred course work should cover material equivalent to that which is covered in the relevant required course. Substitution/transfer requests will need to be approved by the graduate committee for Food Studies programs.

Part-time Study:
Students may matriculate as part-time students.

Total Credits Required:
12 Credits

Global Health, CAS

Contact:
Brooks Gump, Director of Graduate Programs in Public Health
344H White Hall
315-443-2208, bbgump@syr.edu

Faculty
Brooks B. Gump, Brittany Knush, Sandra D. Lane, David Larsen, Katherine McDonald, Lutchie Morine, Lisa Olson-Gugerty, Arthur Owora

The Certificate of Advanced Studies (CAS) in Global Health is a 19-credit hour graduate program providing students applied skills in global health policy and practice. This program emphasizes the integration of social and behavioral determinants of health combined with practice and evidence-based strategies for developing, implementing, and evaluating programs and policies in global settings. The CAS in Global Health can be offered in combination with any graduate degree, or pursued as a stand-alone Certificate. It is particularly useful in providing students in technical or terminal degrees with global health credentials to help them pursue their careers in a global setting. A practicum concluding the program provides students direct field experience.

Students pursuing a CAS in Global Health will learn to design and implement multidisciplinary fieldwork in global settings through adaptation of technical methodologies and strategies across disciplines. Additionally, this graduate certificate program offers students opportunities for meaningful global engagement with stakeholders in ascertaining needs of communities and appropriate, sustainable strategies for improving health.

Admissions Requirements

Transfer Credits
A maximum of three credits from a combination of transfer and/or external examinations/extra-institutional and experiential learning will be accepted toward a C.A.S.

Satisfactory Progress
Per University Rules and Regulations, graduate students must earn a minimum average of 3.0 for work comprising the program for the degree or certificate and minimum cumulative GPA of 2.8.

Required Courses

- HTW 661 - Development and Evaluation of Global Health Programs 3 credit(s)
- HTW 664 - Social & Behavioral Determinants in Global Health 3 credit(s)
- HTW 665 - Applied Global Health Practice and Policy 3 credit(s)
- HTW 667 - Graduate Practicum in Global Health 4 credit(s)
- HTW 668 - Applied Epidemiology in Global Health 3 credit(s)

Global Health Graduate Electives
One elective course is required. Elective courses are approved courses offered through the University in global health-related fields or appropriate technical fields, such as

- ANT 663 - Global Health 3 credit(s)
- HTW 604 - Comparative Health Policy 6 credit(s)

School of Social Work

School of Social Work
Keith A. Alford, Director, 315-443-5562
244 White Hall

Faculty

Graduate
Contact Keith A. Alford, MSW Program Director
244 White Hall, 315-443-5562.

The School of Social Work educates practitioners grounded in social work values and evidence-informed practice to foster strengths and to respond to human service needs of local, state, national and global communities. We accomplish this in collaboration with the practice community through teaching, research, scholarship, and service aimed at achieving social and economic justice in a diverse society.

The school offers two graduate programs leading to the Social Work, MSW degree. The first is a two-year M.S.W. program. The second is an advanced standing program, open only to students who hold a bachelor's degree in social work from a program accredited by the Council on Social Work Education. Both graduate programs prepare students for advanced social work practice and leadership. The graduate program is accredited by the Council on Social Work Education.

The social work program is based on the concept of ecological systems. This concept maintains that the fundamental focus of social work practice is on the transactions of people and their environments and 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.

More than 200 social welfare and health agencies in Central New York provide graduate field instruction opportunities. Graduate students in the two-year degree program must complete 1000 hours of field experience concurrent with their academic work, thereby integrating classroom and field learning.

Dual M.S.W./M.A. program in Social Work and Marriage and Family Therapy

The interdisciplinary program allows students to complete degrees in two distinct professions, the Master of Social Work (MSW) and the Master of Arts in Marriage and Family Therapy (MFT) in three years. The dual degree exposes students to the philosophical and legal distinctions of both degrees, creates a unique opportunity for MSW students to deepen their clinical training with couples and families, and introduces MFT students to a broader range of social work and social welfare course offerings, as well as the art of clinical diagnosis which is in the scope of practice of the Social Work profession.

The dual degree is offered as both a 96-credit, three -year program (for students not admitted to the Advanced Standing MSW program), or a 78-credit two-year program (for students admitted to the Advanced Standing MSW program).
to the MSW Advanced Standing program. The program extends the advanced clinical preparation of the MSW to include an additional year of intensive MFT clinical supervision. It combines the MSW ability to work with systems of all sizes with the more singular focus on families by MFT.

Joint Juris Doctor (J.D. and Master of Social Work (M.S.W.)

The Social Work, JD/MS is a joint degree which may be conferred by the College of Law and the Syracuse University School of Social Work. Students enrolled in these programs may obtain their J.D. and M.S.W. in substantially less time than would be necessary if both programs were separately pursued. Candidates for admission to the joint degree program must first gain admission to each participating academic unit. Applicants for one of the joint Law/Social Work programs must file a petition requesting admission to the joint degree program with the College of Law Interdisciplinary Programs Committee. Interested students should contact the College of Law Advisor, who will assist in the preparation of the petition. The petition must state the proposed program’s objective and include a comprehensive plan of proposed study. A Social Work faculty advisor will provide guidance to meet the requirements for the M.S.W.

The regular M.S.W. can be completed in conjunction with the J.D. in 3 years of full-time study with a total of 120 credit hours (72 Law and 48 Social Work). Persons with an accredited BSSW degree, so long as it forms an integral part of the degree program and is approved by the School of Social Work, A maximum of 12 credits from other graduate study may be transferred toward the 60-credit M.S.W. degree requirement. Academic credit is not given for life experience or previous work experience. Advanced standing M.S.W. students may not transfer credits from another college or university.

Decisions regarding credit transfer are made independent of admissions decisions. Matriculation as a transfer student in the School of Social Work requires completion of the formal admissions process.

Part-Time Study

Students unable to enroll full time may complete the program through part-time study. Several options are available. Evening, daytime, and summer courses are offered. Several courses may also be available in one week intensive “minimester” formats.

Financial Aid

A limited number of Syracuse University scholarships and fellowships are available to both first- and second-year graduate students on the basis of need and merit. All financial aid decisions are made independent of and subsequent to decisions on admission.

Social Work, Advanced Standing Program, MSW

Contact

Keith A. Alford, MSW Program Director, 315-443-5562.

Faculty


Program Description

The advanced standing program is available only to people who have graduated within the past 10 years from an undergraduate social work program accredited by the Council on Social Work Education, and who earned a minimum cumulative GPA of 3.0 in all social work course work. Eligible students are granted advanced standing of 24 credits and complete 36 credits of graduate study as a full-time or part-time matriculated student in the School of Social Work.

Advanced standing applicants who have received a grade below a B in required undergraduate courses in human behavior in the social environment, policy, or research will be required to take the comparable course in the graduate program. Graduate elective credits may not be used to achieve this requirement. Applicants with a grade below a B in foundation practice courses are not eligible for the advanced standing program and may apply to the 60-credit M.S.W. program. Both the regular and the advanced standing program can be completed on a part-time basis.

The advanced standing program includes two courses in the summer and one full academic year as a full-time graduate student or two full academic years as a part-time student. Advanced standing students complete the 36-credit concentration-level curriculum.

Requirements

Advance Clinical Practice Concentration

- SWK 732 - Advanced Practice with Individuals, Families and Groups 3 credit(s)
- SWK 730 - Family Systems Theory 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)
- SWK 733 - Social Work Practice in Mental Health 3 credit(s)
- SWK 761 - Mental Health Policy 3 credit(s)
- SWK 776 - Clinical Practice Evaluation 3 credit(s)
- SWK 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- Electives (9 credits)

Advanced Integrated Practice Concentration

- SWK 724 - Psychopathology 3 credit(s)
- SWK 730 - Family Systems Theory 3 credit(s)
- SWK 743 - Advanced Integrated Social Work Practice 3 credit(s)

Advanced Micro Practice (3 credits)*
Advanced Micro Practice (3 credits)*
Advanced Micro or Macro Practice (3 credits)*
Advanced Policy (3 credits)*

- SWK 775 - Program Evaluation 3 credit(s)
- SWK 776 - Clinical Practice Evaluation 3 credit(s)
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- Electives (6 credits)

Advanced Micro Practice Courses

- SWK 702 - Social Work Practice in Family Mental Health 3 credit(s)
- SWK 707 - Short Term Intervention in Social Work 3 credit(s)
- SWK 709 - Practice with Children, Adolescents
and Families 3 credit(s)
- SWK 712 - Clinical Social Work with Groups 3 credit(s)
- SWK 735 - Principles and Methods of Social Work Practice with Black Families 3 credit(s)
- SWK 736 - Evidence-Based Approaches to Mental Health Treatment 3 credit(s)
- SWK 737 - Strategies for Community Behavioral Health Practice 3 credit(s)
- SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents 3 credit(s)
- SWK 740 - Treatment of Complex Trauma with Individuals 3 credit(s)
- SWK 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)

Advanced Macro Practice Courses
- SWK 714 - Supervision, Consultation and Staff Development 3 credit(s)
- SWK 715 - Administration in Human Services 3 credit(s)
- SWK 774 - Proposal Writing and Program Development 3 credit(s)
- SWK 777 - Community Organization and Development 3 credit(s)
- SWK 778 - Policy Practice and Advocacy 3 credit(s)
- SWK 779 - Seminar in Organizational Development and Leadership 3 credit(s)

Social Work, MSW

Contact
Keith A. Alford, MSW Program Director, 315-443-5562.

The School of Social Work offers a concurrent program of classroom and field instruction for the master's degree. The basic 60-credit program, pursued over two academic years, is composed of a 24-credit foundation curriculum and an advanced area of practice concentration. The foundation curriculum helps students develop the base knowledge, values, and skills necessary for effective generalist practice in all areas of social work.

The M.S.W. foundation curriculum required of all master’s students includes:
- SWK 601 - Fundamentals of Social Work Practice I 3 credit(s) and
- SWK 602 - Fundamentals of Social Work Practice II 3 credit(s)
- SWK 611 - Social Welfare Policy and Services 3 credit(s)
- SWK 626 - Persons in Social Context 3 credit(s)
- SWK 628 - Human Diversity in Social Contexts 3 credit(s)
- SWK 662 - Applied Research in Social Work 3 credit(s)
- SWK 671 - Field Instruction I 3 credit(s) and
- SWK 672 - Field Instruction II 3 credit(s)

M.S.W. Advanced Concentrations in Social Work
After completing the foundation curriculum, students elect an advanced concentration of 36 credits. Those students admitted before Fall 2015 choose either Social Work Practice with Individual, Families and Groups (clinical focus) or Community Organization, Policy, Planning and Administration (“macro” practice). Students admitted Fall 2015 and after will choose from advanced concentrations in Advanced Clinical Practice or Integrated Social Work Practice. Field placements are available in child welfare, health, mental health, gerontology, schools, substance use disorders and many other practice settings.

Required Advanced Concentration Courses
Social Work Practice with Individuals, Families, and Groups (IFG)

(Students admitted before Fall 2015)
Advanced clinical social work theory, methods, and skills are presented in courses applied to social work with individuals, families, and groups in various practice settings.
3 credit hours each, 36 credits total:
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- Advanced Macro Practice (selected from approved list, see listing below)
- Advanced Macro Practice (selected from approved list, see listing below)
- SWK 779 - Seminar in Organizational Development and Leadership 3 credit(s)
- SWK 775 - Program Evaluation 3 credit(s)
Advanced Policy - Select one:
- SWK 761 - Mental Health Policy 3 credit(s)
- SWK 763 - Health Care Policy 3 credit(s)
- SWK 765 - Public Policy and Aging 3 credit(s)
- SWK 768 - Family & Child Welfare Policy 3 credit(s)
- Elective
- Elective
- Elective

Advanced Micro Practice Courses

SWK 702 - Social Work Practice in Family Mental Health 3 credit(s)
- SWK 707 - Short Term Intervention in Social Work 3 credit(s)
- SWK 709 - Practice with Children, Adolescents and Families 3 credit(s)
- SWK 712 - Clinical Social Work with Groups 3 credit(s)
- SWK 735 - Principles and Methods of Social Work Practice with Black Families 3 credit(s)
- SWK 736 - Evidence-Based Approaches to Mental Health Treatment 3 credit(s)
- SWK 737 - Strategies for Community Behavioral Health Practice 3 credit(s)
- SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents 3 credit(s)
Advanced Macro Practice Courses

- SWK 715 - Administration in Human Services 3 credit(s)
- SWK 774 - Proposal Writing and Program Development 3 credit(s)
- SWK 777 - Community Organization and Development 3 credit(s)
- SWK 778 - Policy Practice and Advocacy 3 credit(s)

Advanced Clinical Practice

(students admitted Fall 2015 and after)
This concentration takes an eco-systemic perspective in understanding people and interactions. It is designed to prepare students to become clinicians who provide in-depth mental health services that are relationally focused utilizing evidence-informed interventions with a wide range of populations. There is a special emphasis on trauma-informed practice.

3 credit hours each, 36 credits total:
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)
- SWK 730 - Family Systems Theory 3 credit(s)
- SWK 732 - Advanced Practice with Individuals, Families and Groups 3 credit(s)
- SWK 733 - Social Work Practice in Mental Health 3 credit(s)
- SWK 761 - Mental Health Policy 3 credit(s)
- SWK 776 - Clinical Practice Evaluation 3 credit(s)
- SWK 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)
- Elective
- Elective

Integrated Social Work Practice

(students admitted Fall 2015 and after)
The curriculum in this concentration offers advanced practice courses that address theory, method, and skills for integrating micro, mezzo, and macro levels of practice. It prepares students for direct practice and leadership in a wide range of increasingly complex human service organizations.

3 credit hours each, 36 credits total:
- SWK 771 - Field Instruction III 3 credit(s)
- SWK 772 - Field Instruction IV 3 credit(s)
- SWK 724 - Psychopathology 3 credit(s)
- SWK 730 - Family Systems Theory 3 credit(s)
- SWK 743 - Advanced Integrated Social Work Practice 3 credit(s)
- Advanced Macro Practice (selected from approved list, see listing below)
- Advanced Micro Practice (selected from approved list, see listing below)
- Advanced Micro Practice from micro list or Advanced Macro Practice selected from macro list (both below)
- SWK 775 - Program Evaluation 3 credit(s) or SWK 776 - Clinical Practice Evaluation 3 credit(s)

Advanced Policy - select one:
- SWK 761 - Mental Health Policy 3 credit(s)
- SWK 763 - Health Care Policy 3 credit(s)
- SWK 765 - Public Policy and Aging 3 credit(s)
- SWK 768 - Family & Child Welfare Policy 3 credit(s)
- Elective
- Elective

Advanced Micro Practice Courses

- SWK 702 - Social Work Practice in Family Mental Health 3 credit(s)
- SWK 707 - Short Term Intervention in Social Work 3 credit(s)
- SWK 709 - Practice with Children, Adolescents and Families 3 credit(s)
- SWK 712 - Clinical Social Work with Groups 3 credit(s)
- SWK 735 - Principles and Methods of Social Work Practice with Black Families 3 credit(s)
- SWK 736 - Evidence-Based Approaches to Mental Health Treatment 3 credit(s)
- SWK 737 - Strategies for Community Behavioral Health Practice 3 credit(s)
- SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents 3 credit(s)
- SWK 740 - Treatment of Complex Trauma with Individuals 3 credit(s)
- SWK 781 - Alcohol and Other Drugs in Social Work Practice 3 credit(s)

Law/Social Work (Licensed Clinical), JD/MSW

Degree Requirements
The Juris Doctor/Master of Social Work is a joint degree which is conferred by both the Syracuse University College of Law and the Syracuse University School of Social Work. Students enrolled in this program may obtain their J.D. and M.S.W. in substantially less time than would be necessary if both programs were separately pursued.

Questions and general inquiries should be directed to Adrienne Renfroe, LMSW, Coordinator of Graduate Admissions, 268 White Hall (443-1443; airenfroe@syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Social Work and Marriage and Family Therapy Dual Degree, MA/MSW

Contact:
Keith Alford, Director School of Social Work kalford@syr.edu 315-443-9830
Thom deLara, Associate Professor, Department Chair, Marriage and Family Therapy tdelara@syr.edu 315-443-9830

Faculty:
For full faculty listings please visit:
MSW program: http://falk.syr.edu/Faculty/Department.aspx#SWK
MFT program: http://falk.syr.edu/Faculty/Department.aspx#MFT

Program Description
This interdisciplinary program allows the student to complete degrees in two distinct professions, the Master of Social Work (MSW) and the Master of Arts in Marriage and Family Therapy (MFT) in three years. The dual degree exposes students to the philosophical and legal distinctions of both degrees, creates a unique opportunity for MSW students to deepen their clinical training with couples and families, and introduces MFT students to a broader range of social work and social welfare course offerings as well as the art of clinical diagnosis which is in the scope of practice of the Social Work profession.

Accreditation
The MSW program is accredited by the Council on
Social Work Education.

The MFT program is accredited by the Commission on Accreditation for Marriage and Family Therapy Education.

Part-time Study

Given the rigorous nature of this program only full-time study is allowed. Students who are admitted to the program and drop below fulltime as defined by the sample program plan below will not be able to continue in the dual program.

Admission

Applicants must have earned a bachelor’s degree from an accredited institution, with a minimum cumulative GPA of 3.0 in undergraduate coursework. Application requirements include transcripts, three letters of recommendation, and a personal statement. Admission requirement for this program include TOEFL or IELT S scores for international applicants.

Financial Support

Merit-based financial support is awarded based on a student’s admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Program Federal PLUS Loans, Alternative Loan Programs).

Facilities

The Social Work department is located in 244 White Hall on the Syracuse University campus and provides faculty and student work space. In addition, the Social Work department offers field placement at any of the 200 social welfare, human services and health agencies from 27 counties in upstate New York.

The Marriage and Family Therapy department located at Peck Hall, 601 E. Genesee Street near main campus houses a newly renovated, state of the art, clinical training facility with 14 counseling rooms, observation rooms, and a digital recording system.

Transfer Credit:

The demands of this dual degree program may restrict your ability to transfer in courses from another MSW degree program. Please consult with the Social Work department directly to determine transfer credit eligibility.

Satisfactory Progress:

GPA of 3.0 or better & Pass Field Placement

Degree(s):

Students who complete all requirements will receive the dual Master in Social Work and a Master of Arts in Marriage and Family Therapy.

Students are required to complete all degree requirements as listed in the graduate course catalog for the Master of Social Work, and all degree requirements as listed in the graduate course catalog for the Master of Arts in Marriage and Family Therapy. Students will be required to complete the entire dual degree program before either degree is awarded.

Total Credits: 96

Social Work, JD/MS

The Juris Doctor/Master of Science in Social Work is a joint degree which may be conferred by the College of Law and the Syracuse University Department of Social Work. Students enrolled in these programs may obtain their J.D. and M.S.W. in substantially less time than would be necessary if both programs were separately pursued. The J.D. can be completed in conjunction with the J.D. in 3 years of full time study along with summer coursework and field experience. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

For further information, please contact the College of Law Admissions Office, 315-443-1962, admissions@law.syr.edu

Current College of Law Students:

please contact the College of Law Office of Student Life, 315-443-1146, studentlife@law.syr.edu

Sport Management

Contact

Michael D. Veley, Director and Chair, 315-443-2630
402 MacNaughton Hall

Jeff Pauline, Graduate Program Director, 315-443-2630
402 MacNaughton Hall

Faculty

Rick Burton, Dennis Deninger, Mary Graham, Jeehyun Kim, Rodney Paul, Gina Pauline, Jeff Pauline, Patrick T. Ryan, Michael D. Veley, Patrick T. Walsh, John Wolohan

Internship Coordinators: Kaitlin Berry, Nicole Imbrogno, Francesco Riverso

GRADUATE

The Department of Sport Management offers a 36 credit hour master of science in Sport Venue and Event Management, as well as a 15 credit hour certificate of advanced study (CAS) in Intercollegiate Athletic Advising and Support.

The Master of Science in Sport Venue and Event Management is a 36 credit hour graduate program designed to provide students with the educational knowledge, skill development and experiential sport industry background to excel in the specialized field of managing multi-purpose sport venues and associated event planning opportunities. Instruction centers around core curriculum content areas, including: sport finance, accounting and budgeting; sport event and hospitality management; organizational theory; sport law and legal operations management; technology and information delivery systems; facilities and venue management; communications; and event planning operations and management. The goal is to prepare graduates to think conceptually and analytically and be able to apply principles to a real-world scenario.

The program, housed in the Falk College, includes faculty from the Department of Sport Management, School of Information Studies, S.I. Newhouse School of Public Communications, and the Martin J. Whitman School of Management at Syracuse University. The program is an interdisciplinary, collaborative initiative unique among graduate level sport management programs.

The degree will prepare students for careers in managerial aspects of professional and recreational sports, including stadium and arena facilities management; production and programming of events; marketing and public relations; technological operations management; and middle-level management, marketing and planning in the sport industry.

The CAS in Intercollegiate Athletic Advising and Support is a joint program of the Falk College and School of Education. The program is designed for current and future higher education professionals (e.g. advisors, higher education/ student affairs administrators, and coaches) who wish to understand the research, practice, and policy perspectives associated with intercollegiate sport and student-athlete development in the context of higher education. It includes coursework in the following focus areas: how colleges and intercollegiate athletics work, theoretical perspectives of college sport development and learning; the impact of race, gender, and class on college student athlete access and success; and foundations of advising student-athletes.

Facilities

The Department of Sport Management is located in MacNaughton Hall in the Falk College providing easy access to campus facilities, the Carrier Dome, and community sport venues.

Sport Venue and Event Management, MS
Graduate Courses in Sport Venue and Event Management

- SPM 614 - Foundations of Sport Venue and Event Management 3 credit(s)
- SPM 634 - Sport Event and Hospitality Management 3 credit(s)
- SPM 635 - Marketing of Sport Venues & Events 3 credit(s)
- SPM 637 - Sport Venue Management 3 credit(s)
- SPM 645 - The Strategic Management of People in Sport 3 credit(s)
- SPM 655 - Practicum in Sport Venue and Events Management 3-9 credit(s) 9 credits total required
- SPM 664 - Financial Management of Sport Facilities and Events 3 credit(s)
- SPM 665 - Advanced Sport Event Management 3 credit(s)

Elective Courses: 6 Credits

Required

Master's students will select electives from the iSchool, Newhouse School, and the Whitman School spanning numerous topics including (but not limited to) digital advertising, media law, new media business, operations management, social media in the enterprise, marketing, and supply chain management.

Transfer Credit

A maximum of 9 credits in transfer for courses in which (1) the grade earned was at least a B and (2) the course is evaluated as equivalent to the required course in the program for which it will substitute.

Part-time Study

Program may be pursued on a part-time basis with department approval.

Satisfactory Progress

Certification for an advanced degree at Syracuse University requires a minimum average of 3.0 for work comprising the program for the degree and a 2.8 average for all credits earned.

Intercollegiate Athletic Advising and Support, CAS

Contact:

Teresa M. MacDonald, Ph.D.
Program Director
168 White Hall
443-4822
tmmacdon@syr.edu

Faculty:
Catherine Engstrom, Ph.D., Department of Higher Education, Teresa MacDonald, Ph.D., Department of Sport Management, Dessa Bergen-Cico, Ph.D., Department of Public Health, Dawn Johnson, Ph.D., Department of Higher Education

Description:
The joint,15-credit hour certificate program is designed for current and future higher education professionals (e.g. advisors, higher education/ student affairs administrators, and coaches) who wish to understand the research, practice, and policy perspectives associated with intercollegiate sport and student-athlete development in the context of higher education. It includes coursework in the following focus areas: how colleges and intercollegiate athletics work, theoretical perspectives of college student development and learning; the impact of race, gender, and class on college student athlete access and success; and foundations of advising student-athletes.

Admission:

- Completion of a bachelor's degree and a grade point average of at least 3.0/4.0 in undergraduate study;
- Syracuse University graduate students who wish to add this CAS program as a concurrent program of study will have to meet the same criteria, and will have to achieve a grade point average of at least 3.0/4.0 in their current program of study. They will also have to present written approval from their current program advisors for pursuing the CAS program.
- Submission of a personal statement that focuses on the student's interest in the program as it is conceptualized and offered.

Learning Outcomes:
Apply a broader and more sensitive understanding of the institutional, developmental, and policy-based practices and issues that may influence their work with intercollegiate student-athletes.

Gain a comprehensive understanding of the developmental, psychosocial, and emotional perspectives and needs of intercollegiate student-athletes.

Apply an understanding of the complex issues and roles of intercollegiate sport in higher education in their future work as professionals in higher education.

Evaluate policies and programs that involve intercollegiate advising and support practices based on current understanding of reform.
Requirements: 15 Total Credits

Required Courses: 12 Credits

Required

- SPM 611 - Intercollegiate Athletics in Higher Education 3 credit(s)
- SPM 612 - College Student Athletes 3 credit(s)
- HED 621 - Principles and Practices of Student Affairs Administration 3 credit(s)
- HED 712 - Research on the College Student 3 credit(s)

or

- HED 721 - College Student Development 3 credit(s)

Electives: 3 Credits Required; Choose one Course

- SPM 613 - Practicum in Intercollegiate Athletic Support Services 3 credit(s)
- HTW 618 - Alcohol, Other Drugs, Sex and Gambling: Dynamics of Addiction 3 credit(s)
- HED 664 - Administrative Principles and Practices for Higher Education 3 credit(s)
- HED 761 - Organization and Administration in Higher Education 3 credit(s)
David B. Falk College of Sport and Human Dynamics

David B. Falk College of Sport and Human Dynamics Faculty

Keith A. Alford, Associate Professor, Director of Social Work
Ph.D., Ohio State University, 1997

Colleen Baish Cameron, Professor of Practice, Child and Family Studies
M.Ed., University of Nevada, 2003

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 Pennsylvania, 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

Thorn 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 R 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, Jocelyn Falk Endowed Professor of 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

Ignatius Ijere, Instructor, Public Health
PsyD., Argosy University Chicago, 2015

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. Kieman, Instructor, Food Studies
B.S.A., Syracuse University, 2012

Jeeyoon Kim, Assistant Professor, Sport Management
Ph.D., Florida State, 2016

Eric Kingson, Professor, Social Work
Ph.D., Brandeis University, 1979

Karen E. Kirkhart, Professor, Social Work
Ph.D., University of Michigan, 1979

Brittany Kmush, Assistant Professor, Public Health
Ph.D., Johns Hopkins Bloomberg School of Public Health, 2016

Ambika Krishnakumar, Associate Professor and Chair, 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

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

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

Deiane 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

Arthur Owora, Assistant Professor, Public Health
DrPH., University of Oklahoma, 2015

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, 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
CFS 500 - Selected Topics
Child and Family Studies
3 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 515 - Graduate Proseminar in Child and Family Studies
Child and Family Studies
3 credit(s) At least 1x fall or spring
This proseminar is for first-year Child and Family Studies graduate students to familiarize and gain knowledge about research, teaching, ethical principles, and the profession.

CFS 521 - Statistical Concepts I
Child and Family Studies
3 credit(s) At least 1x fall or spring
First course in statistics; provides tools for data analysis. Descriptive and inferential statistics.

CFS 522 - Statistical Concepts II
Child and Family Studies
3 credit(s) At least 1x fall or spring
Second course in statistics. Analysis of variance, multiple regression, and multivariate analysis.
PREREQ: CFS 521

CFS 531 - Research Methods/CFS I
Child and Family Studies
3 credit(s) At least 1x fall or spring
Fundamental concepts of research methodologies employed in the study of children and families, focusing on the research process.
PREREQ: CFS 521

CFS 533 - Intrvntn Mds:Inft&Pre-Sc
Child and Family Studies
3 credit(s) Irregularly
Theoretical and pragmatic bases and dimensions of early childhood programs. Programs of prevention and remediation, both research based and service oriented. Recent manuscript materials.

CFS 534 - Quality Infant Toddler Care Giving Workshop
Child and Family Studies
3-2 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 - Separation & Divorce: Impact on Children & Families
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.

CFS 600 - Obs&Assesmnt/Infnts&Chldrn
Child and Family Studies
3 credit(s) Irregularly
Demonstrations of preschool tests. Opportunities in naturalistic settings for proficiency in the interaction coding technique, APPROACH, in other observation methods, and in infant developmental tests. Reliability and validity problems in ecological research.

CFS 636 - Crtcl Iss/Early Chldhd
Child and Family Studies
3 credit(s) Irregularly
Contemporary issues. Emphasis on developmentally appropriate strategies of teaching and child care. Issues such as cultural diversity, family demographics, role of play.

CFS 637 - Theo,Intrp,Apps/Child Dev
Child and Family Studies
3 credit(s) At least 1x fall or spring
Disparate theoretical approaches to child development, especially competing interpretations of the behavior of young children.

CFS 638 - Child Development in the Context of Schooling
Child and Family Studies
3 credit(s) Irregularly
Exploration of some of the issues relevant to understanding the development of children in the context of schooling.

CFS 645 - The Developing Infant
Child and Family Studies
3 credit(s) Irregularly
Double Numbered with: CFS 345
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.

CFS 647 - Play, Childhood Development, and Early Childhood Education
Child and Family Studies
3 credit(s) Irregularly
Role of parents and teachers in supporting children's play from infancy through early school age; enriching classroom play; diversity and special needs considerations.

CFS 648 - Family Theory:Interp&Applc
Child and Family Studies
3 credit(s) At least 1x fall or spring
Critical assessment of the theoretical perspectives of family studies; survey of major substantive developments.
CFS 649 - Marital and Cohabiting Roles and Relationships
Child and Family Studies
3 credit(s) Irregularly
In-depth examination of the theory and research in the areas of marriage, cohabitation, and same-sex relationships.
PREREQ: CFS 648 AND CFS 631

CFS 652 - Mindfulness in Children and Youth
Child and Family Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CFS 452
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 653 - Child and Family Development Across the Life Cycle
Child and Family Studies
3 credit(s) At least 1x fall or spring
Course focuses on human growth and development birth through old age within cultural and environmental context. Course is intended to advance learning about research methods lifespan development specific to assessment and measurement of lifespan development.

CFS 657 - Contemporary Issues/Human Sexuality
Child and Family Studies
3 credit(s) Irregularly
Individual responses to social pressures. Issues of the sexual revolution and its impact in terms of sexual behavior and dysfunction.

CFS 658 - Prosocial & Moral Dev in Child
Child and Family Studies
3 credit(s) Irregularly
Theories and research on familial, societal, and cultural variables related to prosocial and moral development in infants and young children. Child observation required.

CFS 659 - Families and Workplaces
Child and Family Studies
3 credit(s) Irregularly
A multi-disciplinary perspective on the evolution of the relationship between workplaces and families.

CFS 665 - Language Development in Children & Families
Child and Family Studies
3 credit(s) Irregularly
Double Numbered with: CFS 365
Psycholinguistic theories and child language research. Social class, cultural, familial, and dialectical influences. Language enrichment programs and assessments. Systemic observations of child language required. Additional work required of graduate students.

CFS 667 - Child & Fam Crss/Cltrl Persp
Child and Family Studies
3 credit(s) At least 1x fall or spring
Introduction to field methods, the study of childhood, and family in cross-cultural perspectives.

CFS 668 - Fam Var:Soc Class&Eth Det
Child and Family Studies
3 credit(s) Irregularly
Variables of residence (rural, urban, suburban), social class, and ethnicity as they pertain to family organization. Variations in marital relationships, child rearing, kinship, and patterns of mobility.

CFS 670 - Experience Credit
Child and Family Studies
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

CFS 674 - Promises and Problems in Youth and Emerging Adulthood
Child and Family Studies
3 credit(s) At least 1x fall or spring
Development of youth and emerging adults in family and cultural contexts emphasizing both positive outcomes and challenges. Roles of parents, peers, communities, social structures, media influences, and institutions in youth/emerging adult development.

CFS 676 - Language Development in A multi-disciplinary perspective on the evolution of the role of critical events on family life and processes, as well as the study of normative and non-normative stressors, coping and resiliency patterns used by families experiencing stress.

CFS 690 - Independent Study
Child and Family Studies
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

CFS 695 - Sex Role Socialztn & Fam
Child and Family Studies
3 credit(s) Irregularly

CFS 700 - 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 732 - Research Methods/CFS II
Child and Family Studies
3 credit(s) At least 1x fall or spring
Issues and problems of developmental and interactional analysis. Design of studies, development of measurement categories, and analyses of data. Doctoral student or permission of instructor.
PREREQ: CFS 622 AND CFS 631

CFS 747 - Parenting Research Seminar
Child and Family Studies
3 credit(s) Irregularly
Provide an overview of relevant theoretical and empirical work that describes the process of parenting. Primary mode of inquiry will be through critical analysis and discussion of relevant literature in the field. Instructor consent required.
PREREQ: CFS 631 OR MFT 882 OR COU 758 OR NSD 654 OR NSD 795 OR PSY 624 OR PSY 679 OR SOC 606

CFS 800 - 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 830 - Sem Child Development  
Child and Family Studies  
3 credit(s) Irregularly  
Development of the child, either in the home or in the nursery school. Past seminars have included: developmental theories of Jean Piaget and Erik Erikson, difference and deficit models of education.  
Repeatable  

CFS 835 - Iss & Pros/Child&Fam Devt  
Child and Family Studies  
3 credit(s) Irregularly  
An integrative approach to contextualizing development and examining the multitude of influences on child and family development.  
PREREQ: CFS 637  

CFS 840 - Seminar: Child Development and Family Relations  
Child and Family Studies  
3 credit(s) Irregularly  
An interactive approach to contextualizing development and examining the multitude of influences on child and family development.  
Repeatable 1 time(s), 6 credits maximum  

CFS 990 - Independent Study  
Child and Family Studies  
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  

CFS 997 - Masters Thesis or Project  
Child and Family Studies  
0-6 credit(s) Every semester  
Repeatable  

CFS 999 - Dissertation  
Child and Family Studies  
1-15 credit(s) Every semester  
Repeatable 14 time(s), 15 credits maximum  

MFT 567 - Sexual Issues for the Helping Professional  
Marriage and Family Therapy  
3 credit(s) Only during the summer  
Sexual abuse, sexual assault, sexual dysfunction, sex and disability, and nontraditional sexual relationships. Introduction to educational and therapeutic intervention.  

MFT 600 - Selected Topics  
Marriage and Family Therapy  
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  

MFT 603 - Introduction to Trauma Studies  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
Crosslisted with: HTW 603  
This course is an overview of trauma studies and examines trauma typology, prevention, and intervention and is taught through an ecosystemic lens.  

MFT 625 - Family Systems and Therapy  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
Theory and techniques. Therapeutic approaches such as structural, strategic, intergenerational, and experiential family therapy. Not for Marriage and Family Therapy majors.  

MFT 641 - Divorce Mediation  
Marriage and Family Therapy  
3 credit(s) Only during the summer  
Crosslisted with: SWK 641  
Basic theory and skills of divorce mediation. Includes introduction to conflict resolution theory, divorce law, financial planning, custody issues, and marital and family dynamics related to divorce.  

MFT 642 - Therapy with LGBTQ Couples and Families  
Marriage and Family Therapy  
3 credit(s) Only during Summer  
LGBTQ relationship issues and sexual and gender identity development and clinical work with LGBTQ clients. Heterosexual/cisgender privilege, coming out, internalized oppression, cultural identities, formation of families and parenting, and gender transition.  

MFT 643 - Family Therapy with Complex Trauma  
Marriage and Family Therapy  
3 credit(s) Only during the summer  
Explores the effects of trauma on child development and family functioning, and introduces the use of family therapy for the treatment of complex trauma. Learn to develop treatment intervention strategies in a systemic framework.  

MFT 644 - Family Therapy with LGBTQ Youth  
Marriage and Family Therapy  
3 credit(s) Only during the summer  
Overview of family therapy with LGBTQ youth, taught through a social justice lens. The course examines how specific LGBTQ issues affect families and other social systems.  

MFT 645 - Queering Theory, History and Clinical Practice  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
Overview of LGBTQ studies, including traditional understandings of sexuality and gender, historical and contemporary trajectories of LGBTQ people and application to clinical work with LGBTQ clients.  

MFT 661 - Introduction to Family Therapy Practice  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
Introduces basic therapeutic skills of family therapy practice.  

MFT 662 - Systems Dynamics in a Group Setting  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
Cognitive and affective awareness of group process through didactic and experiential instruction. Group techniques for the treatment of family issues. For students in Marriage and Family Therapy Program.  
PREREQ: MFT 661  

MFT 663 - Applied Research in Social Work  
Marriage and Family Therapy  
3 credit(s) Every semester  
Crosslisted with: SWK 662  
Design and execution of research in human service settings. Proposal development, creation of quantitative and qualitative instruments, coding of data, computer-based data analysis, and production of research reports.  

MFT 671 - Introduction to Family Systems  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
Family as a system. Family functioning and the impact of developmental stage, sociocultural context, and family of origin.  

MFT 672 - Couple Therapy: Theory and Techniques  
Marriage and Family Therapy  
3 credit(s) At least 1x fall or spring  
The couple relationship and ways to facilitate it. Psychodynamic, behavioral, and systems approaches. Non-marital, marital, and divorcing couples. For students in Marriage and Family Therapy program.  
PREREQ: MFT 661, MFT 671
MFT 673 - Child Development Theory and Family Therapy Interventions  
**Marriage and Family Therapy**  
3 credit(s) Irregularly  
Child development, relationship development, and family therapy model and techniques. The dynamics of interplay among family systems, gender, child development, and other contextual variables.  

MFT 681 - Marriage and Family Therapy Ethics and Issues  
**Marriage and Family Therapy**  
3 credit(s) at least 1x fall or spring  
Ethical, legal, and professional issues in marriage and family therapy. For students in the Marriage and Family Therapy program.  

MFT 682 - Marriage and Family Therapy Theory and Techniques  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
Theory and practice of the major family therapies.  
PREREQ: MFT 671  

MFT 683 - Assessment in Marriage and Family Therapy  
**Marriage and Family Therapy**  
3 credit(s) Only during the summer  
Individual, couple, and family assessment utilizing a family systems perspective.  

MFT 684 - Family Therapy Perspectives on Cultural Diversity  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
How six basic dimensions of diversity (race, ethnicity, class, gender, sexual orientation, religion) interface with the dynamics of oppression to structure reality in general, and more specifically the process of therapy.  

MFT 686 - Play Therapy with Children and Families  
**Marriage and Family Therapy**  
3 credit(s) Only during the summer  
Examines the assessment and psychotherapeutic treatment of children and families through play therapy. Working with children and families in crisis including loss, abuse, and illness, is a particular focus.  

MFT 687 - Spirituality in Therapy  
**Marriage and Family Therapy**  
3 credit(s) Only during the summer  
Explores spirituality in the context of therapy with individuals and families. Explores relationship between client and therapist by acknowledging spirituality as a possible dimension of personhood while considering language, worldview, power, relationship and individual/systemic issues.  

MFT 688 - Family Therapy Across the Life Cycle  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
Integrative family therapy course exploring the content and process of family therapy in a way that values the similarities and differences inherent in individual and family therapy across the developmental life cycle.  

MFT 724 - Psychopathology  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SWK 724  
Stressful processes of living, focusing on individual attitudinal and behavioral responses that may be maladaptive. Traditional mental health theories and classifications, and relevant perspectives from sociology, social psychology, and biology.  

MFT 750 - Introduction to Marriage & Family Therapy Practicum  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
Introduction to clinical practice in the Couple and Family Therapy Center  
PREREQ: MFT 750  
Repeatable 1 time(s), 6 credits maximum  

MFT 761 - Practicum in Marriage & Family Therapy II  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
PREREQ: MFT 687  
Second course of four required courses in supervised clinical practice in Couple and Family Therapy for students in the Marriage and Family Therapy program.  

MFT 762 - Practicum in Marriage and Family Therapy III  
**Marriage and Family Therapy**  
3 credit(s) At least 1x fall or spring  
PREREQ: MFT 761  
Third course of four required courses in supervised clinical practice in Couple and Family Therapy for students in the Marriage and Family Therapy program.  

MFT 771 - Family Systems Approach to Addictions and Eating Disorders: Theory and Therapy  
**Marriage and Family Therapy**  
3 credit(s) Irregularly  
Family-systems approach to the assessment and treatment of addictions, alcoholism, eating disorders, and obesity.  

MFT 772 - Divorce and Remarriage: Family Theory and Therapy  
**Marriage and Family Therapy**  
3 credit(s) Irregularly  
Family-systems approach to separation, divorce, remarriage, and stepfamily formation. Review of research and family intervention strategies.  

MFT 773 - Family Violence: Theory and Therapy  
**Marriage and Family Therapy**  
3 credit(s) Irregularly  

MFT 774 - Parenting and Family Enrichment: Programs and Research  
**Marriage and Family Therapy**  
3 credit(s) Irregularly  
Theory and research on parenting and family enrichment. Overview of intervention programs  

MFT 776 - Dysfunctional Families: Theory and Therapy  
**Marriage and Family Therapy**  
3 credit(s) Irregularly  
Overview of intervention programs  
PREREQ: MFT 776  
Repeatable 1 time(s), 6 credits maximum  

355
3 credit(s) Irregularly
Family-systems approach to treatment of multi-problem, chronically distressed, and rigid families.

MFT 777 - Family Perspectives on Gender Roles and Socialization: Theory & Therapy
Marriage and Family Therapy
3 credit(s) Irregularly
Gender and its implications for socialization, family functioning, and family therapy.

MFT 778 - Loss Across the Life Cycle: Family Theory and Therapy
Marriage and Family Therapy
3 credit(s) Irregularly
Systemic approach to theory and treatment of normative and non-normative losses across the family life cycle.

MFT 779 - Sexual Identity and Family Therapy
Marriage and Family Therapy
3 credit(s) Irregularly
Systemic approach to sexual identity and family therapy theory and clinical applications.

MFT 781 - Alcohol and Other Drugs in Social Work Practice
Marriage and Family Therapy
3 credit(s) At least 1x fall or spring
Crosslisted with: SWK 781
Introduces theory and practice strategies appropriate to understand and address alcohol and other drug problems among clients in various human services settings. Prerequisite does not apply to MFT students.

MFT 860 - Advanced Family Therapy Practicum
Marriage and Family Therapy
1 credit(s) Every semester
Advanced supervised clinical experience for Marriage and Family Therapy doctoral students. A minimum of four credits required
Repeatable

MFT 861 - Supervision in Marriage and Family Therapy
Marriage and Family Therapy
3 credit(s) Even Academic Yr e.g. 2004-5
Theory and techniques of supervision in marriage and family therapy. Required course for AAMFT Supervisor designation.

MFT 862 - Advanced Family Therapy with Children and Adolescents
Marriage and Family Therapy
3 credit(s) Even Academic Yr e.g. 2004-5
Assessment, diagnosis, and family treatment of child-hood and adolescent dysfunction. Interaction between child and family system.

MFT 863 - Advanced Couple Therapy
Marriage and Family Therapy
3 credit(s) Odd academic yr e.g. 2007-8
Family systems approach to the assessment and treatment of couple dynamics, including sexuality.

MFT 864 - Family Systems and Family Health
Marriage and Family Therapy
3 credit(s) Irregularly
Relationship between family process and family health, effect of chronic illness on the family system, and overview of family wellness paradigm.

MFT 865 - Advanced Family Therapy Theory and Practice
Marriage and Family Therapy
3 credit(s) Odd academic yr e.g. 2004-5
Critique of family therapy theories. Theory development.

MFT 870 - Practicum in Marriage and Family Therapy Supervision
Marriage and Family Therapy
1 credit(s) Irregularly
Supervision of Marriage and Family Therapy therapists-in-training. Partial fulfillment of AAMFT requirements for approved supervisor status.
PREREQ: MFT 861
Repeatable

MFT 875 - Cultural Diversity: Family Theory and Therapy
Marriage and Family Therapy
3 credit(s) Odd academic yr e.g. 2007-8
Influence of racial, ethnic, and religious heritage on family structure and therapeutic intervention.

MFT 882 - Assessment and Research Methods in Marriage and Family Therapy
Marriage and Family Therapy
3 credit(s) Odd academic yr e.g. 2007-8
Overview of family assessment techniques. Issues and procedures in family therapy process and outcome research.

MFT 885 - Qualitative Research Methods in Family Therapy
Marriage and Family Therapy
3 credit(s) Odd academic year e.g. 2007-8
A qualitative inquiry in the social sciences. Students will learn to apply qualitative research methodology to understand human phenomena and life.
PREREQ: CFS 631

MFT 960 - Internship in Marriage and Family Therapy
Marriage and Family Therapy
0 credit(s) Every semester
Supervised internship in Marriage and Family Therapy. Nine to 12-month family therapy internship with AAMFT approved supervision.
Repeatable

MFT 996 - Doctor of Practice in Couple and Family Therapy Capstone
Marriage and Family Therapy
3 credit(s) Every semester
Integration of theoretical, research and practice skills through the development of a written capstone proposal and an oral presentation. Students must take the capstone twice for a total of 6 credits. Students must complete 18 program credits before beginning capstone.
Repeatable 1 time(s), 6 credits maximum

MFT 997 - Master's Thesis or Project
Marriage and Family Therapy
0-6 credit(s) Every semester
Repeatable

MFT 999 - Dissertation
Marriage and Family Therapy
1-12 credit(s) Every semester

Department of Public Health, Food Studies and Nutrition
Food Studies
FST 600 - Selected Topics
Public Health, Food Studies and Nutrition
1-3 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

FST 601 - Seminar in Food Studies and Systems
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Introduction to selected foundational texts, research strategies, and disciplinary developments in food studies and food systems.
FST 603 - The Human Right to Adequate Food and Nutrition
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: FST 403
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 604 - Food Studies Research Methods
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Research methods for graduate food studies introducing qualitative and quantitative methods, GIS, and food system assessments with emphasis on research design, data management, and writing a proposal.

FST 621 - 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 421
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 700 - 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 702 - Political Economy of Food
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Classic and contemporary debates within the political economy of agriculture and food. Explores peasant economies, agrarian questions, the capitalist development of agriculture, neoliberalization, governance, and politics of consumption.

FST 703 - Transnational Food, Health and the Environment
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Explores the relationship between human and environmental health outcomes and the history, structure, function and governance of the food system at global, national and subnational levels.

FST 706 - Gender, Food, Rights
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Advanced investigation of the relationship between the human right to adequate food and nutrition, and women's rights.
PREREQ: FST 603

FST 797 - Practicum in Food Studies and Systems
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Students participate in the practical functioning of food systems using learned competencies in an organization or other setting. Requires completion of core requirements and instructor consent.

FST 997 - Masters Thesis
Public Health, Food Studies and Nutrition
1-6 credit(s) Every semester
Repeatable 5 time(s), 6 credits maximum

Health and Wellness

HTW 603 - Introduction to Trauma Studies
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Crosslisted with: MFT 603
This course is an overview of trauma studies and examines trauma typology, prevention, and intervention and is taught through an ecosystemic lens.

HTW 604 - Comparative Health Policy
Public Health, Food Studies and Nutrition
6 credit(s) Only during the summer
Double Numbered with: HTW 404
Overview 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 605 - Cognitive Behavioral Approaches to Stress Reduction
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: HTW 405
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 606 - Clinical Evaluation and Assessment of Addictions
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: HTW 406
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.
COREQ: HTW 618

HTW 607 - Motivational Interviewing for Behavioral Change
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: HTW 407
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 608 - Addictions in Cultural Context
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: HTW 408
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 618

HTW 609 - The Impact of Addictions on Families and Relationships
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: HTW 409
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 610 - Addictions Treatment Planning and Referral
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: HTW 407
Treatment, planning, clinical record keeping, and discharge planning in addition to individual and group, recovery models, replacement therapy, and dual-diagnosis.
PREREQ: HTW 606

HTW 612 - Global Perspectives in Alcohol & Other Drug Policies
Public Health, Food Studies and Nutrition
3 credit(s) Every semester
Double Numbered with: HTW 412
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.
students.

**HTW 615 - Public Health Ethics**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 415  
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 618 - 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 619 - Research Methods in Public Health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
This course will provide students with an introduction to research methods common in the field of Public Health. The course will focus on methods for community-based research involving human participants.

**HTW 620 - Research Proposal Development**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Planning, design, organization and management of a master's level research project or thesis in the public health, food studies and nutrition disciplines.

**HTW 621 - Research Methods in Public Health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
An introduction to commonly used methods for analyzing public health data. Use of statistical and graphical software will be emphasized.

**HTW 622 - Research Proposal Development**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Multivariate approaches to analyzing public health data, including multiple regression, logistic regression, and partial correlations. Use of statistical software will be emphasized.

**HTW 623 - Ethical Issues in Public Health, Food and Nutrition Research**  
*Public Health, Food Studies and Nutrition*  
1 credit(s) At least 1x fall or spring  
Focuses exclusively on ethics in the conduct of research and includes a guided process to completion of an IRB application.

**HTW 624 - Prevention in Addiction Services**  
*Public Health, Food Studies and Nutrition*  
4 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 321  
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.

**HTW 625 - Introduction to Biostatistics**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
An introduction to commonly used methods for analyzing public health data. Use of statistical and graphical software will be emphasized.

**HTW 626 - Intermediate Biostatistics**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Conduct statistical analysis of public health related time-to-event data and counts data, and conduct meta-analysis as they relate to public health data.

**HTW 630 - Introductory Biostatistics**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
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 631 - Intermediate Biostatistics**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Conduct statistical analysis of public health related time-to-event data and counts data, and conduct meta-analysis as they relate to public health data.

**HTW 632 - Advanced Biostatistics**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Conduct statistical analysis of public health related time-to-event data and counts data, and conduct meta-analysis as they relate to public health data.

**HTW 633 - Spatial statistics for public health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Statistical approaches to the analysis of public health related spatial data.

**HTW 634 - Ethics in Addiction Services**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 436  
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 635 - Ethics in Addiction Services**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 436  
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 636 - Native American Health Promotion**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 438  
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 637 - Graduate Practicum in Global Health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 437  
Crosslisted 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.

**HTW 640 - Development and Evaluation of Global Health Programs**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Use of common paradigms employed by global agencies promoting best-practice in program design, implementation and evaluation. Students analyze a range of global health programs, reflecting direct service, prevention, partnership, capacity building, and systems strengthening.

**HTW 641 - Culture and Reproductive Health and Medicine**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) Irregularly  
Crosslisted with: HTW 462  
Cultural anthropological approaches to cross-cultural 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 642 - Global Health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: HTW 463  
Double Numbered with: HTW 463  
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 643 - Social & Behavioral Determinants in Global Health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Child and family health problems and issues over the lifespan with particular attention to main biomedical and biosocial causes of poor health and shortened survival. Examples from local, national, and international settings reviewed in depth.

**HTW 644 - Global Health Programs**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 464  
Crosslisted with: HTW 463  
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 645 - Applied Global Health Practice and Policy**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: PAI 665  
Applied practice of global health, focused in developing countries, through grounding in current global health practice and policy review and multidisciplinary global health classroom projects.

**HTW 646 - Social & Behavioral Determinants in Global Health**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: HTW 463  
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 647 - Global Health Programs**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: HTW 467  
Crosslisted with: HTW 463  
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 648 - Applied Global Health Practice and Policy**  
*Public Health, Food Studies and Nutrition*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: PAI 665  
Applied practice of global health, focused in developing countries, through grounding in current global health practice and policy review and multidisciplinary global health classroom projects.
HTW 668 - Applied Epidemiology in Global Health
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Epidemiological methods used in the study of the etiology, distribution, and control of child, family and global community health problems. Topics will be illustrated with examples from local, national and global settings.

HTW 669 - Disability and Global Health
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Crosslisted with: DSP 669
Major theories, historical events, laws, and research related to health and wellness worldwide among those living with disabilities.

HTW 670 - Experience Credit
Public Health, Food Studies and Nutrition
1-6 credit(s)
Repeatable

HTW 690 - 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

HTW 704 - Epidemiology of Modern Plagues
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
An introduction to topics and methods in infectious disease epidemiology. Includes the use of geographic information systems to visualize infectious disease trends and estimating the importance of risk factors associated with the disease.

HTW 706 - Environmental Epidemiology
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Provides an introduction to topics and methods in environmental epidemiology. Includes the critical evaluation of research on how various environmental toxicants might be affecting human health.

HTW 997 - Master's Thesis
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Written document exhibiting substantive and original research in Public Health. Planned under direction of major departmental advisor.

Nutrition Science and Dietetics

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

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.

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.

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.

NSD 516 - Nutrition Counseling Experience
Public Health, Food Studies and Nutrition
1 credit(s) Every semester
An applied interaction to develop nutrition counseling skills for working with a variety of individuals for health promotion, disease prevention in preparation for conducting medical nutrition therapy.

NSD 517 - Food as Medicine
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 417
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.

NSD 525 - Nutrition for Fitness and Sports
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 425
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.
NSD 627 - Public Health Nutrition
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 427
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: MAT 221 AND NSD 225

NSD 637 - Integrative and Functional Nutrition
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
A focus on patient centered care using a combination of conventional evidence based medical nutrition therapies that recognize genetic uniqueness, core physiological imbalances and the role of the environment in health and disease.
PREREQ: NSD 665 AND NSD 667

NSD 647 - 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 447
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: NHM 225

NSD 648 - Dietetics Practice Across the Lifespan
Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Integration of information necessary to understand nutrition issues of importance at different life stages with the skills to assess nutritional status of individuals with non-complex medical issues at different life stages.
PREREQ: NSD 225

NSD 650 - Dietetics Practicum
Public Health, Food Studies and Nutrition
1-6 credit(s) Every semester
Structured experience in dietetics management, community, and clinical nutrition in community agencies, hospitals, and food systems operations integrated with classroom theory.
Repeatable

NSD 652 - Mediterranean Food and Culture: A Florence Experience
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 452
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.

NSD 654 - Nutrition Research Methods
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Integrates an understanding and application of nutrition research methods. Emphasis on evidence-based analysis.

NSD 655 - Issues in Community Nutrition
Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Analysis of government role in meeting food and nutrition needs of selected populations. Relationship of public health and welfare policy to nutritional status. Community assessment and program evaluation.

NSD 658 - Participatory Program Planning
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 458
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.

NSD 660 - Readings in Nutrition
Public Health, Food Studies and Nutrition
1-3 credit(s) Every semester
Repeatable 1 time(s), 6 credits maximum

NSD 665 - Metabolism of Micronutrients
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Review of the micro-nutrients, their structures, metabolic and/or physiologic functions, requirements, deficiency states and possible toxicities, nutritional assessment, food sources, and interrelationships with other nutrients.

NSD 666 - Metabolism
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Metabolic interrelationships and control in the use of proteins, carbohydrates, and lipids.

NSD 667 - Metabolism of Macronutrients
Public Health, Food Studies and Nutrition
4 credit(s) At least 1x fall or spring
An overview of the structure and function of the major macronutrients (proteins, carbohydrates, and lipids) in the maintenance of human health. Introduction to metabolic pathways and the principles of cellular bioenergetics in the regulation and utilization of energy nutrients.

NSD 670 - 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 680 - Seminar in Food and Nutrition
Public Health, Food Studies and Nutrition
1-3 credit(s) At least 1x fall or spring
Topics in food and nutrition.
Repeatable 1 time(s), 6 credits maximum

NSD 681 - Medical Nutrition Therapy I
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 481
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.

NSD 682 - Medical Nutrition Therapy I Lab
Public Health, Food Studies and Nutrition
1 credit(s) At least 1x fall or spring
Double Numbered with: NSD 482
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.
COREQ: NSD 681

NSD 683 - Medical Nutrition Therapy II
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Double Numbered with: NSD 483
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.

NSD 684 - Medical Nutrition Therapy II Lab
Public Health, Food Studies and Nutrition
1 credit(s) At least 1x fall or spring
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.

PREREQ: NSD 682

NSD 685 - Nutritional Genomics
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
An advanced study of the effects of genetic variation on optimal nutrient intake and the nutritional regulation of metabolic pathways.

NSD 690 - 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 695 - Nutritional Status Evaluation
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Principles and practices. Dietary, biochemical, anthropometric, and clinical procedures. Laboratory experiences.

NSD 755 - Field Experience in Community Nutrition
Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Field experience with public and private agencies that include programs with a food and/or nutrition component.

PREREQ: NSD 655

NSD 756 - Food and Public Policy
Public Health, Food Studies and Nutrition
3 credit(s) Irregularly
Introduction to theory of public policy illustrated with examples of a variety of food, nutrition, and agricultural policies. Historical development of policies and regulatory issues.

NSD 765 - Problems in Human Metabolism
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Selected topics in therapeutic nutrition and metabolism for students with substantial background in nutrition and disease.

PREREQ: NSD 666

NSD 795 - Research Methods
Public Health, Food Studies and Nutrition
3 credit(s) At least 1x fall or spring
Research techniques applicable to the study of nutrition.
Repeatable 1 time(s), 6 credits maximum

NSD 997 - Master's Thesis
Public Health, Food Studies and Nutrition
1-6 credit(s) Every semester
Repeatable

School of Social Work

Social Work

SWK 600 - Selected Topics
School of Social Work
1-6 credit(s) Upon sufficient interest
Exploration of a topic in social work, not covered by the standard curriculum, but of interest to faculty and students in a particular semester.
Repeatable

SWK 601 - Fundamentals of Social Work Practice 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.

COREQ: SWK 671

SWK 602 - Fundamentals of Social Work Practice II
School of Social Work
3 credit(s) At least 1x 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.

SWK 603 - Social Work and the Human-Animal Bond
School of Social Work
3 credit(s) At least 1x fall or spring
Double Numbered with: SWK 403
Introduction to theory and research on the roles of human-companion animal relationships in social work and biopsychosocial well-being. Additional work required of graduate students.

SWK 611 - Social Welfare Policy and Services
School of Social Work
3 credit(s) At least 1x fall or spring

School of Social Work

SWK 626 - Persons in Social Context
School of Social Work
3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 626
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 628 - Human Diversity in Social Contexts
School of Social Work
3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 628
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 635 - Readings in Feminist Psychological Theories
School of Social Work
3 credit(s) Upon sufficient interest
Crosslisted with: WGS 635
Feminist psychological theories will be identified and analyzed. The intersection of feminist theory and traditional psychological theory, with particular critique to mental health interventions and programs will be examined.

SWK 640 - Issues in Health Care
School of Social Work
3 credit(s) Irregularly
Repeatable

SWK 641 - Divorce Mediation
School of Social Work
3 credit(s) Only during the summer
Crosslisted with: MFT 641
Basic theory and skills of divorce mediation. Includes introduction to conflict resolution theory, divorce law, financial planning, custody issues, and marital and family dynamics related to divorce.
SWK 657 - Processes of Aging  
School of Social Work  
3 credit(s) At least 1x fall or spring  
Double Numbered with: SWK 357  
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 658 - Practice and Policy in Adult Corrections  
School of Social Work  
3 credit(s) Upon sufficient interest  
Double Numbered with: SWK 458  
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 662 - Applied Research in Social Work  
School of Social Work  
3 credit(s) Every semester  
Crosslisted with: MFT 663  
Design and execution of research in human service settings. Proposal development, creation of qualitative and quantitative instruments, coding of data, computer-based data analysis, and production of research reports.

SWK 667 - Field Instruction I  
School of Social Work  
3 credit(s) Every semester  
Supervised practice experience to apply knowledge, social work principles, values, and methods and obtain increasing competence and skill for professional practice. No credit will be given for completion of only one semester of field work.  
COREQ: SWK 601

SWK 672 - Field Instruction II  
School of Social Work  
3 credit(s) Every semester  
Supervised practice experience to apply knowledge, social work principles, values, and methods and obtain increasing competence and skill for professional practice. No credit will be given for completion of only one semester of field work.  
PREREQ: SWK 671  
COREQ: SWK 602

SWK 682 - Introduction to Equine Assisted Activities and Therapies  
School of Social Work  
3 credit(s) Only during the summer  
Double Numbered with: SWK 482  
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 689 - Individualized Readings Program  
School of Social Work  
3 credit(s) Every semester  
Selected readings in social work and related fields under guidance of appropriate faculty.

SWK 690 - Independent Study  
School of Social Work  
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

SWK 700 - Selected Topics  
School of Social Work  
1-6 credit(s) Upon sufficient interest  
Exploration of a topic in social work not covered by standard curriculum, but of interest to second year graduate students and faculty in a particular semester.  
Repeatable

SWK 702 - Social Work Practice in Family Mental Health  
School of Social Work  
3 credit(s) Upon sufficient interest  
Advanced family systems practice. Exploration of topics including chronic mental illness, chronic physical illness, couple issues, child focused families, alternative families, aging and death. Political and social contexts of practice.  
PREREQ: SWK 732

SWK 703 - Direct Service with the Elderly  
School of Social Work  
3 credit(s) Irregularly  
Analysis of social work practice models/theories, and development of professional skills as they apply to practice problems confronted in work with the elderly.  
PREREQ: SWK 601, SWK 602, SWK 657

SWK 707 - Short Term Intervention in Social Work  
School of Social Work  
3 credit(s) At least 1x fall or spring  
Development of clinical skills in Solution Focused Brief Therapy, Cognitive Therapy and Narrative Therapy. Intervention effectiveness is stressed,. Role playing, lecture, group processing and assignments specific to each approach are used to facilitate skill development.  
PREREQ: SWK 601

SWK 709 - Practice with Children, Adolescents and Families  
School of Social Work  
3 credit(s) At least 1x fall or spring  
Intervention models examined in the framework of family empowerment and advocacy for organizational change. Examines implications of diverse, culturally based child rearing practices for design of intervention strategies to strengthen and empower families.  
PREREQ: SWK 730

SWK 710 - Topics in Advanced Social Work Practice and Policy  
School of Social Work  
1-6 credit(s) Upon sufficient interest  
Repeatable

SWK 712 - Clinical Social Work with Groups  
School of Social Work  
3 credit(s) At least 1x fall or spring  
Experiential seminar explores frameworks for therapeutic intervention with formed groups. Focuses on students' prior experience, aids in integration of new models and techniques into social work model for clinical work with groups. Requires concurrent work with short term group.  
PREREQ: SWK 601

SWK 713 - Social Work Case Management Practice  
School of Social Work  
3 credit(s) Upon sufficient interest  
Micro, mezzo, and macro levels of system intervention for populations at risk. Emphasis on empowerment strategies.  
PREREQ: SWK 601
SWK 714 - Supervision, Consultation and Staff Development
School of Social Work
3 credit(s) Upon sufficient interest
Functions, methods, and techniques of supervision and consultation within an organizational context. Design, implementation, and evaluation of staff development programs. Emphasis on overcoming barriers to multicultural groups and enhancing staff morale, motivation, and effectiveness.
PREREQ: SWK 626

SWK 715 - Administration in Human Services
School of Social Work
3 credit(s) At least 1x fall or spring
Organizational and administrative theories and principles are applied to a range of human services. Administrative issues related to effective delivery of services include job design, resource procurement and allocation, strategic planning, and quality management.
PREREQ: SWK 601

SWK 718 - Working with Animals in the Human Services: Observation and Practices
School of Social Work
3 credit(s) Only during the summer
Individual projects requiring intensive observation, study, or active participation in settings where animals are part of human service delivery. Linkage of theory and findings in research literature to social work practice.
PREREQ: SWK 601 AND SWK 603

SWK 724 - Psychopathology
School of Social Work
3 credit(s) At least 1x fall or spring
Crosslisted with: MFT 724
Stressful processes of living, focusing on individual attitudinal and behavioral responses that may be maladaptive. Traditional mental health theories and classifications, and relevant perspectives from sociology, social psychology, and biology.

SWK 727 - Family Violence: Policy, Practice and Research
School of Social Work
3 credit(s) At least 1x fall or spring
Examines family violence from a social work perspective. Integrated understanding of causation and intervention. Direct practice and policy issues. Role of research in the family violence field.

SWK 730 - Family Systems Theory
School of Social Work
3 credit(s) At least 1x fall or spring
Exploration of foundational and current couple and family therapy theories as they relate to functional and dysfunctional interactions, and to the practice of Social Work with individuals, families and groups.

SWK 732 - Advanced Practice with Individuals, Families and Groups
School of Social Work
3 credit(s) At least 1x fall or spring
Application of systems thinking to advanced social work practice with individuals, families, and groups. Intervention with problems of aging, child welfare, health, mental health, and in the workplace.
PREREQ: SWK 730

SWK 733 - Social Work Practice in Mental Health
School of Social Work
3 credit(s) At least 1x fall or spring
Advanced practice course in clinical social work concentration. Focuses on integration of knowledge in SW program, while including group therapy, cognitive behavioral therapy and professional use-of-self perspective.
PREREQ: SWK 730 AND SWK 732

SWK 735 - Principles and Methods of Social Work Practice with Black Families
School of Social Work
3 credit(s) At least 1x fall or spring
Principles and methods in working with black families. Practice interventions are examined within a cultural context. Attention will be given to the historical underpinnings that have molded the black experience in America.
PREREQ: SWK 601

SWK 736 - Evidence-Based Approaches to Mental Health Treatment
School of Social Work
3 credit(s) At least 1x fall or spring
Evidence-based practices within recovery-oriented paradigm for treating individuals with serious mental illness. Focus on assessment, treatment outcomes, and translating research into practice.
PREREQ: SWK 601

SWK 737 - Strategies for Community Behavioral Health Practice
School of Social Work
3 credit(s) At least 1x fall or spring
Skills related to engagement and motivational enhancement for social work practice with individuals within community-based settings. Models: recovery-oriented practices, person-centered planning, motivational interviewing, and classroom experience involves interaction with agency practitioners.

SWK 738 - Core Concepts in Trauma Treatment for Children and Adolescents
School of Social Work
3 credit(s) At least 1x fall or spring
Introduction of core concepts that inform evidence-based assessment and intervention with traumatized children and adolescents. Addresses the level of functioning of primary caregiving environments and assesses capacity of the community to facilitate restorative processes.
PREREQ: SWK 601

SWK 739 - Applied Neuroscience in the Human Services
School of Social Work
3 credit(s) At least 1x fall or spring
The course explores key findings in neuroscience and consideration of implications for human service practitioners across disciplines and settings. Enables integration of scientific findings, related controversies, and ethical issues into approach to practice and policy.

SWK 740 - Treatment of Complex Trauma with Individuals
School of Social Work
3 credit(s) At least 1x fall or spring
Preparation for clinical practice with individuals who have experienced complex trauma. Current interventions for trauma treatment and factors involved in appropriate treatment selection are addressed.

SWK 742 - Violence, Bullying, & Trauma: Clinical Perspectives
School of Social Work
3 credit(s) At least 1x fall or spring
Analysis of violence, bullying, harassment, hazing, and traumatic effects that result. A systems theory perspective is applied to organizations and to families. Evidence-based approaches for intervention and remediation are discussed.

SWK 743 - Advanced Integrated Social Work Practice
School of Social Work
3 credit(s) At least 1x fall or spring
Principles, modalities, techniques of social work practice integrated across micro and mezzo levels. Advanced assessment, intervention and evaluation across systems, in community-based practice, through the context of mental health, child welfare, health, aging.
PREREQ: SWK 601
COREQ: SWK 771
SWK 761 - Mental Health Policy
School of Social Work
3 credit(s) At least 1x fall or spring
PREREQ: SWK 761

SWK 763 - Health Care Policy
School of Social Work
3 credit(s) Upon sufficient interest
Present organization of health care services, development of government legislation, and regulation. Organization and growth of public and private services and their impact on special populations.
PREREQ: SWK 761

SWK 765 - Public Policy and Aging
School of Social Work
3 credit(s) At least 1x fall or spring
Identify social policy formulations relevant to the changing lifestyle of the elderly. Implications of such policies for the social institutions and delivery systems serving elderly persons and their families.
PREREQ: SWK 761

SWK 766 - Seminar in International Social Welfare Policy and Social Work
School of Social Work
3 credit(s) Upon sufficient interest
Cross-national comparisons.
PREREQ: SWK 761

SWK 768 - Family & Child Welfare Policy
School of Social Work
3 credit(s) At least 1x fall or spring
Examines policies, programs affecting three groups of families and children: supportive services for all, target services for those at risk, and intensive interventions to protect children with acute problems. Measurement and political dimensions of policy making analysis.
PREREQ: SWK 761

SWK 771 - Field Instruction III
School of Social Work
3 credit(s) Every semester
Supervised practice experience in social agencies related to student's concentration choice. No credit will be given for only one semester of field work.
COREQ: SWK 732 OR SWK 743

SWK 772 - Field Instruction IV
School of Social Work
3 credit(s) Every semester
Supervised practice experience in social agencies related to student's concentration choice. No credit will be given for only one semester of field work.
PREREQ: SWK 771

SWK 774 - Proposal Writing and Program Development
School of Social Work
3 credit(s) At least 1x fall or spring
Planning, development, and funding of social service programs in both private nonprofit and public settings.

SWK 775 - Program Evaluation
School of Social Work
3 credit(s) Every semester
PREREQ: SWK 662
COREQ: SWK 771 OR SWK 772

SWK 776 - Clinical Practice Evaluation
School of Social Work
3 credit(s) Every semester
PREREQ: SWK 662
COREQ: SWK 771 OR SWK 772

SWK 777 - Community Organization and Development
School of Social Work
3 credit(s) At least 1x fall or spring
Theoretical orientations and skills required for social work practice of community economic development in urban and rural settings.
PREREQ: SWK 602

SWK 778 - Policy Practice and Advocacy
School of Social Work
3 credit(s) At least 1x fall or spring
Social policy analysis, planning and advocacy knowledge, methods and skills applied to social reform and social change in health and welfare arenas.

SWK 779 - Seminar in Organizational Development and Leadership
School of Social Work
3 credit(s) At least 1x fall or spring
Theories, research, and practice models of organizational development and leadership. How organizations function and personal exploration of the self as change agent. Skills of analysis and synthesis for organizational change in public and nonprofit settings.
PREREQ: SWK 771

SWK 781 - Alcohol and Other Drugs in Social Work Practice
School of Social Work
3 credit(s) At least 1x fall or spring
Crosslisted with: MFT 781
Introduces theory and practice strategies appropriate to understand and address alcohol and other drug problems among clients in various human services settings. Prerequisite does not apply to MFT students.
PREREQ: SWK 601

SWK 785 - AIDS: Social and Preventive Issues
School of Social Work
3 credit(s) Upon sufficient interest
Studies policy and practice issues affecting individuals infected by human immunodeficiency virus (HIV). Examines nature of illness, its psychosocial sequelae, differential impact on ethnic/cultural groups in U.S., and strategies for ethnic sensitive practice.

SWK 786 - Individualized Reading Program
School of Social Work
1-4 credit(s) Every semester
Selected readings in social work and related fields under guidance of appropriate faculty.

SWK 787 - Individual Study
School of Social Work
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

SWK 997 - Masters Thesis
School of Social Work
0-6 credit(s) Upon sufficient interest
Individual thesis guidance. Comprehensive research plan is presented for faculty approval. Thesis submitted to Graduate School for examination.
Sport Management

SPM 600 - Selected Topics
Sport Management

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

SPM 611 - Intercollegiate Athletics in Higher Education
Sport Management

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

The emergence of intercollegiate athletics in higher education. The academic, socio-cultural, economic, and political benefits and costs. Reform initiatives, athletic governance, and oversight processes impacting athletic policies, advising practices, and support services.

SPM 612 - College Student Athletes
Sport Management

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

Understanding college student-athletes based on theories of development and college student diversity including gender, sexual orientation, race, ethnicity, disability, international status and preparation. Complexities, challenges and opportunities for student-athletes. Examination of eligibility, advising and support practices.

SPM 613 - Practicum in Intercollegiate Athletic Support Services
Sport Management

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

Supervised practicum experience in an athletic advising and support services unit within a department of intercollegiate athletics. A two-hour biweekly seminar is required. Instructor consent required.

PREREQ: SPM 611 AND SPM 612 AND HED 621 AND (HED 721 OR HED 712)

SPM 614 - Foundations of Sport Venue and Event Management
Sport Management

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

Application of sport management theory to venue and event management associated with hosting, managing and sponsoring events. Management process, including theory of management and practical applications within the sport venue and event planning industry.

SPM 634 - Sport Event and Hospitality Management
Sport Management

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

Theoretical and practical principles and procedures for designing, planning, implementing, and evaluating a variety of sporting events.

PREREQ: SPM 614

SPM 635 - Marketing of Sport Venues & Events
Sport Management

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

Students will learn concepts and skills of sport marketing, sponsorship, and revenue generation as they pertain to a variety of sport venue and event settings.

SPM 637 - Sport Venue Management
Sport Management

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

Double Numbered with: SPM 437

Planning and managing different types of sport facilities. Understanding the complexity of conceptualizing, constructing, promoting, managing and maintaining modern sport stadiums, arenas, domes and multi-purpose facilities. Additional work required of graduate students.

SPM 645 - The Strategic Management of People in Sport
Sport Management

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

A survey course of management theory, principles, and techniques in the sport industry, with a particular emphasis on managing the various types of workers (e.g., employees, contractors, volunteers), necessary to produce sport services and events.

SPM 649 - Technologies in Game Day Operations
Sport Management

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

Double Numbered with: SPM 449

Current applications of technology as it relates to sport venues and sport organizations will be examined. Topics include: sound systems, ticketing systems, video and score board operations, and lighting systems. Additional work required of graduate students.

SPM 650 - Sports Ticket Sales
Sport Management

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

Double Numbered with: SPM 350

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.

SPM 654 - Sport Venue Operations
Sport Management

3 credit(s) Irregularly

Producing and implementing various sport and entertainment events. Organizational set-up, planning and execution of events in multi-purpose sport facilities. Analyze logistics, budgeting and operational costs of transforming venue into different sporting and entertainment configurations.

PREREQ: SPM 614

SPM 655 - Practicum in Sport Venue and Events Management
Sport Management

3-9 credit(s) Every semester

The practicum provides students with hands-on industry experience in sports venue and event settings. Students will utilize knowledge and skills learned in other Sport Venue and Event Management coursework through industry application.

PREREQ: SPM 614

Repeatable 2 time(s), 9 credits maximum

SPM 664 - Financial Management of Sport Facilities and Events
Sport Management

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

Sport finance applied to managerial control of sport venues and events. Fundamental business concepts. Analysis of financial statements, budget forecasting and planning, securing optional funding sources and capital budgeting as related to multiple sport venues.

PREREQ: SPM 614

SPM 665 - Advanced Sport Event Management
Sport Management

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

Students will build upon prior coursework and knowledge through the planning of a local sport event. All facets of the event will be covered in detail and applied to the actual event.

SPM 670 - Experience Credit
Sport Management

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

SPM 690 - Independent Study
Sport Management

1-6 credit(s)

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 700 - Selected Topics
Sport Management

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
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, three interdisciplinary undergraduate programs, 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, 95 staff, 750 graduate students and 2,000 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.

Graduate Degrees

The School offers master’s (M.A.) and doctoral (Ph.D.) degrees in anthropology, economics, geography, history, political science, and sociology, as well as Public Administration, PhD and Social Science, PhD. In addition, four professional degrees are offered: the Public Administration, the International Relations, and, for mid-career executives, the Public Administration (Executive) and the International Relations (Executive).

Executive Education

Through its executive Education program, Maxwell offers several executive master’s degrees, certificates of advanced study, and training programs for mid-career professionals from across the globe. These students, scholars and participants study here from a few weeks to more than a year. Maxwell hosts Humphrey Fellowship Edward R. Murrow Fellows and provides training programs for a wide array of U.S.-based and international NGOs, public sector organizations and agencies, governments and universities.

Centers and Institutes

Each department and program in the Maxwell School gives research a central place in its work. Graduate students are included as partners in intellectual activities and in contacts with the public service.

Many faculty members participate in one or more of eight research centers and institutes that provide valuable resources to faculty clustered around significant research topics. Among the research centers at the Maxwell School are the Aging Studies Institute, Program for the Advancement of Research on Conflict and Collaboration, the Center for Environmental Policy and Administration, , the Center for Policy Research, Lerner Center for Public Health Promotion and the Institute for National Security and Counterterrorism.

Also serving the Maxwell community as clearinghouses for major domestic and international issues are the School’s two institutes: the Alan K. Campbell Public Affairs Institute and the Moynihan Institute of Global Affairs. Through the involvement of visiting scholars, reflective practitioners, and the community, the institutes contribute to understanding, cooperation, and ongoing dialogue in the areas of governance, law and politics, and citizenship in the United States and interdisciplinary issues of global concern. An Institute for the Study of the Judiciary, Politics, and the Media enjoys input from three different schools - The College of Law, The Maxwell School and the S.I. Newhouse School of Public Communications.

Students interested in these centers and institutes should contact faculty in their departments with affiliations in respective centers and institutes. All the centers and institutes welcome interested students who want to learn the craft of research and work and write with faculty.

Aging Studies Institute

Director Janet Wilmoth
314 Lyman Hall

ASI is a collaborative initiative of the Maxwell School of Citizenship & Public Affairs and the David B. Falk School of Sport and Human Dynamics. Its mission is to coordinate and promote aging-related research, training, and outreach at Syracuse University. With over 30 faculty affiliates from more than a dozen departments, ASI provides multi-disciplinary research and education that is relevant to almost every academic discipline on campus. ASI is committed to developing the next generation of scholars and practitioners. It provides education and training opportunities to undergraduate students and faculty members at Syracuse University. ASI supports the undergraduate minor in Gerontology, where students are exposed to a variety of theoretical perspectives, research methodologies, and policy initiatives. It also coordinates and promotes a range of age-related graduate-level coursework that is offered by various SU departments. In addition, ASI hosts the biennial gerontology education workshop for undergraduate- and graduate-level instructors interested in proposing or strengthening aging-related courses.

Center for Environmental Policy and Administration (nondegree)

Director Peter Wilcoxen, 426 Eggers Hall

Faculty include Jacob Bendix, A.H. Peter Castro, Matthew Huber, W. Henry Lambright, Allan Mazur, John McPeak, Susan Millar, Thomas Perreault, David Popp, Sarah Pralle, Jane M. Read, Farhana Sultana, Robert Wilson

The Center for Environmental Policy and Administration (CEPA) is an interdisciplinary center within Syracuse University’s Maxwell School of Citizenship and Public Affairs. CEPA explores environmental issues from an integrated perspective that considers technical, social, and humanistic aspects of environmental matters and prepares leaders who can blend those dimensions as they confront the world’s complex environmental challenges. It brings together faculty and graduate students from a range of Maxwell departments, including anthropology, economics, geography, political science, public administration, public affairs, and sociology.

Recent work by CEPA members has examined a wide range of topics, including climate change, international trade and the environment, technology and environmental policy, environmental governance and management, environmental issues in developing countries, land use changes, biodiversity conservation, energy policy, the role of environmental advocacy groups, and public attitudes toward the environment.

CEPA has a close working relationships with the Center for Policy Research, and with SU faculty from outside Maxwell, particularly those in biology, earth sciences, and the colleges of Law and Engineering. Also, CEPA members work with faculty at the nearby SUNY College of Environmental
Center for Policy Research (nondegree)
426 Eggers Hall, 315-443-3114
Director Leonard Lopoo
Associate Director for Metropolitan Studies Program John Yinger
Associate Director for Budget and Administration Margaret Austin
The Maxwell School Center for Policy Research (CPR) conducts a broad range of interdisciplinary research and other activities related to public policy, involving graduate students as assistants and junior colleagues. Faculty consult regularly with government agencies and other institutions concerned with the issues they are studying.

The Center includes faculty from several departments within the Maxwell School, mainly Economics, Public Administration and International Affairs, and Sociology. This collection of specialists brings a depth of experience and skill to research and offers students a wealth of opportunity for discussion and advice on their own research, as well as the possibility of research assistantships on projects directed by the faculty. The Center provides a base for visiting scholars from the United States and abroad. CPR also publishes working papers and Policy Briefs, which are available on the CPR website.

Daniel Patrick Moynihan Institute of Global Affairs (nondegree)
Director Margaret G. Hermann, 346 Eggers Hall, 315-443-4022; Fax: 315-443-9085
The Daniel Patrick Moynihan Institute of Global Affairs facilitates interaction among faculty and graduate students across the Maxwell School who are exploring the issues raised by an increasingly interdependent world composed of diverse cultures, economies, and political systems. With its interdisciplinary orientation, the institute encourages research that broadens our knowledge about how to improve the quality of governance and citizenship beyond the borders of the United States. An important goal involves translating knowledge into practice by arranging for dialogue and collaboration between institute faculty and students and visiting scholars and practitioners. The institute fulfills its mission by supporting research projects, sponsoring lecture series, providing research fellowships and internship opportunities to graduate students, publishing the products of its working groups, and organizing conferences, credit-bearing seminars, and certificates of advanced study. Current activities focus on the following three themes: (1) The Transnational NGO Initiative, which works on understanding the challenges facing civil society organizations that work in a transnational context, and determining what kinds of skills are needed, to lead such endeavors; (2) The Mapping Global Insecurity Project which studies the geopolitical areas that insurgent, terrorist, and transnational criminal groups govern and the illicit economy that results; and (3) The Transboundary Crisis and Disaster Management Project which explores how such incidents are managed and the linkages between engineers, policymakers, and citizens in these endeavors.

The Moynihan Institute is also host to six regional centers: the South Asia Center, the East Asia Program, the Moynihan European Research Center, The Program on Latin America and the Caribbean, the Middle Eastern Studies Program, and the Korean Peninsula Affairs Center. The Regional centers provide the Syracuse University student body with changes to learn more about the world in which they live and will work, facilitating students gaining education, research, language, and internship experiences in these various regions. The centers also provide curriculum development grants for faculty to create new courses on regional topics and monies to hire language instructors in less familiar languages such as Turkish and Hindi. www.maxwell.syr.edu/ moynihan.aspx

Institute for National Security and Counterterrorism
Director, William C. Banks, Dineen Hall, Suite 300, 315-443-2284
The Institute for National Security and Counterterrorism (INSTC) is a multidisciplinary, university-based center for the study of national security, international security, and counterterrorism, offering law and graduate certificates of advanced study and conducting incisive research and timely policy analysis.

INSTC’s extensive national security capabilities are founded on the expertise of INSTC Director William C. Banks-College of Law Board of Advisors Distinguished Professor and Maxwell School Professor of Public Administration and International Affairs—and augmented by affiliated faculty and other experts throughout the national security, international security, and counterterrorism communities at SU and beyond. Banks helped set the scholarly parameters of this field by co-authoring its two leading textbooks-National Security Law (Aspen, 6th ed.) and Counterterrorism Law (Aspen, 3rd ed.)

INSTC’s work addresses key challenges pertaining to national and international security, countterterrorism, postconflict reconstruction, cybersecurity, defense strategy, human security, and community resilience. Through structured academic support, INSTC faculty and staff help advance student-based research and analytical proficiency, and, to prepare for careers, students engage in advanced coursework, guided research projects, crisis simulations, internships, capstone projects, and networking events. In addition, INSTC provides study abroad options and sponsors student law and security organizations.

Founded in 2003 as a partnership between SU College of Law and SU Maxwell School, INSTC continues to advance its mission to be an internationally recognized center for interdisciplinary teaching, for multi-method research into complex security problems, and for public service to practitioners grappling with intractable security issues. Agile and responsive, INSTC’s educational and research programs continue to track the changing nature of these challenges, as battlefields become virtual, wars become asymmetric, homeland security becomes critical, human rights crises become commonplace, and the rule of law becomes indispensable.

Program for the Advancement of Research on Conflict and Collaboration (nondegree)
Director Catherine Gerard, 400 Eggers Hall, 315-443-2367
More than 60 Syracuse University faculty members are associates of PARCC.

PARCC is an interdisciplinary program devoted to advancing the theory and practice of the analysis of conflict, the resolution of conflict, collaborative problem solving, and collaborative governance. The primary goals of the program are to develop knowledge about the context and stages of different conflicts and, on that basis, to assess and teach alternate methods of conflict resolution. A special interest is the emergence of collaborative problem solving as a critical skill set for the public sector. The diverse backgrounds of PARCC faculty members and graduate students reflect the program’s emphasis on interdisciplinary research and theory building. They are drawn from the departments of anthropology, geography, history, international relations, political science, public administration, social science, and sociology and from the schools of law, education, public communications, management, and human services and visual and performing arts.

The research interests of PARCC associates may be characterized by a series of questions: What are the significant differences and similarities of various kinds of conflicts? How can theory be made applicable to the work of practitioners and the experience of practitioners contribute to the refinement of theory? How can governments work more collaboratively with citizens? What are the appropriate strategies at different stages of conflicts? How can intractable conflicts be moved to the stage where de-escalation can take place? What kinds of conflict resolution and collaborative methods are effective for different circumstances?
Anthropology at Syracuse University is oriented primarily toward sociocultural studies and historical archaeology, with emphases on applied and interpretive research. As a department within the Maxwell School, the graduate anthropology program offers dual degree tracks that include public affairs or public policy. Department strengths include language and power, religious systems, medical anthropology, the social use of terrestrial space, local-level globalization, culture change, indigenous environmentalism, and social movements. The department offers a strong focus on the African diaspora within its historical archaeology program. Interdisciplinary ties within the Maxwell School, with SUNY College of Environmental Science and Forestry, and with SUNY Upstate Medical University enhance offerings in environmental topics, historical preservation, policy planning, international relations, and health-related subjects.

Graduate certificates are available for qualifying anthropology graduates in Women’s Studies, South Asian Studies, Conflict Resolution, Cultural Heritage Preservation, Middle Eastern Affairs, and Latin American Studies.

Anthropology is primarily a Ph.D. program. A master’s degree may be earned as a step toward the doctorate. While some graduate students are self-funded, most are supported with teaching assistantships and fellowships. Anthropology graduate students comprise a multietnic international community. More than half are women. The department is sufficiently large to provide focused breadth, yet small enough to encourage graduate students to work closely with faculty mentors.

The department participates in the University-wide Future Professoriate Project, which trains graduate students for college teaching and otherwise prepares them for academic and professional careers. Anthropology graduates who have elected to pursue non-academic careers have found employment in governmental agencies and in NGOs.

The department of anthropology at Syracuse University encourages students from various backgrounds to seek admittance. Not all entering students have a degree in anthropology; some enter the program with backgrounds in public health, English literature, history, psychology, journalism, or biology. Graduate students are expected to secure outside funding to help support their doctoral research. The department has a limited endowment, the Claudia De Lys Scholarship in Cultural Anthropology, which provides modest support for a few students annually. A formal course in grant writing has proved helpful to many graduates in obtaining funding. The University offers nine-month teaching and research assistantships. Outstanding students are eligible for University Fellowships, and the Dean’s Summer Assistantship. U.S. citizens interested in studying South Asia are eligible for National Resource Fellowships through the SU South Asia Center.

A few doctoral projects are the following:

- The nature of childhood in a 19th century abolitionist congregation;
- Gender and land movements in Brazil;
- Resettlement experiences of Bosnian refugees in the United States;
- Sexual minorities and political activism in Pakistan;
- The politics of public space in India;
- Deconstructing culture, religion, and class among Irish tenant farmers;
- The archaeology of community, ritual, and politics in 17th c. Maryland; and
- Social networks and plantation slavery from colonial to modern in Brazil.
315-443-2605

Faculty Jacob Bendix, Peng Gao, Matthew Huber, Natalie Koch, Susan W. Millar, Don Mitchell, Mark Monmonier, Anne E. Mosher, Thomas Perenaut, Jane M. Read, David J. Robinson, Jonnell Robinson, Todd D. Rutherford, Farhana Sultana, John C. Western, Robert M. Wilson, Jamie L. Winders

The Syracuse University Department of Geography is an integral component of the Maxwell School and of the College of Arts and Sciences. Interdisciplinary work has always been a particular strength. Specifically, in addition to our expertise in cultural, economic, environmental, historical, physical, and urban geography, and in geographic information and analysis, we maintain active links to several Maxwell programs, including the Program for the Advancement of Research on Conflict and Collaboration, the Center for Environmental Policy and Administration, and the Moynihan Institute for Global Affairs. Strong links also exist with Food Studies, Women’s and Gender Studies, Earth Sciences, Civil and Environmental Engineering, the School of Architecture, and with the State University of New York College of Environmental Science and Forestry. Finally, the department has long valued investigating geographical processes in a wide array of regions, places, and landscapes. Recent graduate students have conducted field research in Latin America and the Caribbean, South Asia, East Asia, Europe, Canada, and throughout the U.S.

The prospective student will find opportunities to develop an array of research skills and to study and conduct research with the faculty in the following specializations:

Culture, Justice, and Urban Space: Syracuse geographers join the study of urban landscapes, politics, and processes to broader struggles for racial and gender equality, social justice, and political transformation. Through projects that range from constructing urban geographies of memory to examining the relationship between immigration and changing racial formations in cities to analyzing struggles over and for urban public space and the right to the city, our faculty draw on a variety of methodological and theoretical perspectives, particularly critical social theory, to interrogate the production of urban spaces and experiences.

Gender, Identity and Citizenship: At Syracuse, geographers study gendered spaces of everyday life as sites of oppression and resistance where identities are made and re-made across the landscape. We examine the gendering of geopolitical relationships that structure human migration, labor practices in the global economy, gender and the city, memory, social justice, historical geography, feminist methodologies, and other critical standpoints from which to study men’s and women’s places in the world. Central to each of these themes is a re-working of the concept of citizenship.

Globalization and Regional Development: At Syracuse, geographers research the relationship between flows and networks of activity, interaction and power that are producing an increasingly interconnected world, and the historical and geographical contexts within which the lives of people, and places, are being transformed. By focusing on globalization processes, we examine the complex and often contradictory mechanisms through which flows of capital, people, information and knowledge are sped-up, spread-out and made more intensive. By focusing on development, we pay particular attention to the inequalities created by these flows among groups, and in spaces and places that have been historically marginalized or subject to control within national and international systems.

Political Economy: Syracuse geographers understand political economy to be a social relationship. This social relationship is deeply geographical: our research starts from the understanding that social relations, social struggles, and social justice are all intricately related to the ways that political-economic processes are imbricated in and transformed through spatial relationships. In addition to understanding the relationship between political economy and geography, we seek to understand the relationship political economy and gender; political economy and labor; political economy and the restructuring of places and regions; political economy and culture. In all of these we want to understand how space, place, region, and scale structure and restructure political economic processes, even as political economic processes restructure space, place, region, and scale.

Nature, Society, Sustainability: Syracuse geographers view nature-society relations dialectically. Central to this vision is a focus on the relations of power through which particular forms of nature are produced and governed. We share a commitment to critical scholarship and environmental justice. We value both critical empirical - often field-based - investigation and critical social theory. Nature-society scholarship at Syracuse University encompasses several clusters, including political ecology and the political economy of nature; environmental governance; environmental history; natural hazards and social vulnerability; environment and development; environmental justice; and the social dimensions of environmental change. In recent years, Syracuse geographers have conducted research on the gendered dimensions of water governance in Bangladesh; climate change politics in the United States; the historical development of the US petro-chemical industry; extractive industries and rural livelihoods in Bolivia; forest fire dynamics and management in California; and environmental mapping and indigenous geographies in Guyana.

Environmental Science and Landscape Dynamics: Physical geographers at Syracuse University focus on spatial and temporal aspects of environmental science, with the aim of clarifying the dynamic processes that shape the earth’s landscapes. Faculty conduct research in four broad areas: human and natural disturbance impacts on riparian habitats and forest ecosystems; development of field and analytic techniques for examining recent and Pleistocene environmental change; processes and implications of sediment transport in rivers; and climate - land-surface interactions. Graduate students have use of our Physical Geography Research Laboratory, which is equipped for a variety of soil and sediment analyses, and includes a Sedigraph 5120 for particle size analysis.

Geographic Information Technology: Faculty in the Geospatial Information, Analysis and Modeling focus have a range of research and teaching interests, including cartography, applications and methods in geographic information technologies (i.e., geographic information systems, computer cartography, remote sensing, multimedia), spatial analysis and modeling, and hydrological and ecosystem modeling. Syracuse Community Geography involves students in working directly with community organizations to solve real-world problems. Faculty and graduate students conduct research on a range of key social and environmental issues, with recent topics including spatial analysis of hunger and food justice in the city of Syracuse; mapping local nature preserves; geospatial surveillance technologies; modeling channel migration; and use of remote sensing to analyze tropical forest structure, demography, and certified forestry. Graduate students have access to two laboratory facilities: the Geographic Information and Analysis Laboratory in Eggers Hall, and the Integrated Spatial Analysis Laboratory in Crouse-Hinds Hall.

Within the framework of these principal clusters, students pursue individually designed programs, assisted by their advisor and advisory committee. The goal is to maintain and enhance an open intellectual environment with continuous interaction between graduate students and departmental faculty. In support of this, the department maintains strong collaborative relationships with academic departments across campus, as well as with allied departments at other universities in the region. We also organize a colloquium series every semester that brings distinguished scholars to the Department, and occasionally organize conferences and symposia across a range of topics.

We typically have about 30 students in residence. Each student has an advisory committee, consisting of the principal advisor and one or more faculty members. The committee advises the student and regularly evaluates progress toward the M.A. or Ph.D. degree.

History Department Overview
Chair Michael Ebner
Director of Graduate Studies Susan Branson
145 Eggers Hall
315-443-2210

Faculty Alan Allport, Susan Branson, Craig 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. Kitcher, Chris Kyle, Elisabeth D. Lasch-Quinn, Gladyss McCormick, Mark G. Schmeller, Martin S. Shanguyah, Junko Takeda, Margaret Susan Thompson

The history department has been granting M.A. and Ph.D. degrees since 1871. As part of the College of Arts and Sciences and, since 1924, the Maxwell School, the department has links to both the humanities and social science programs of the
University.

The early development of the department received special impetus with the acquisition of the personal library of about 20,000 volumes of the great German historian Leopold von Ranke.

Today it is one of the major European history collections in the United States. There are also substantial collections of primary materials dealing with the history of East Africa, the United Kingdom, and the United States.

A major emphasis in the M.A. and Ph.D. programs is the development of skills necessary to pursue original research. The training in both programs is valuable for careers in business, law, government, the media, archival work, and education. The department has placed its recipients of graduate degrees in state and federal research positions, in local historical agencies, in libraries and archives, and in business, as well as in colleges and universities across the nation and abroad.

**Political Science**

**Department Overview**

Mehrzad Boroujerdi, Chair

100 Eggers Hall

315-443-2416


Established in 1924, the department of political science is a national leader in graduate training.

The curriculum is divided into seven fields: American politics, international relations, comparative politics, political theory, public administration & policy, law & courts and social policy studies. Master's students are not bound by any specific field requirements. Ph.D. candidates must declare a major and a minor field or two major fields; they must take at least four courses in each major field and three courses in a minor field. Most Ph.D. students in political science receive financial aid, most commonly department assistantships. Students may also be funded by SU fellowships.

**Public Administration and International Affairs**

**Department Overview**

Chair and Associate Robert Bifulco, 215 Eggers Hall, 315-443-4000

**Faculty**


The Department of Public Administration and International Affairs offers program, core and international affairs coursework that explores a broad range of topics underlying contemporary global challenges. Modern society demands innovative leadership, highly skilled public managers, analysts and domestic and international issue experts.

The department educate students for careers that serve the public good across sectors, fields and nations.

Inaugurated in 1924, under the leadership of Dean William E. Mosher, Maxwell's public administration program is the oldest graduate program of its kind in the United States. Since its founding, the program has experienced major growth in the growth and development of the field of public administration and policy. The school's first dean was instrumental in the establishing the American Society for Public Administration (ASPA), and served as its first president. The journal, Public Administration Review was also founded at Maxwell in 1937.

Maxwell's Master of Arts in International Relations was established in 1993 to build on the School's interdisciplinary breadth, and the professional degree programs were merged into one department to take advantage of their synergies. The school of public administration and international affairs. These synergies allow the department to offer master's degrees in public administration and international affairs, as well as doctoral degree in public administration.

Drawing upon the interdisciplinary strength of the Maxwell School as a social science research institution, the Master of Arts in International Relations provides proficiency in research, analysis, and project management, as well as subject-matter expertise in peace, security, and conflict, international development, governance and diplomacy, and international trade, as well as a wide variety of area studies.

The Master of Public Administration coursework provides proficiency in public and nonprofit management, public budgeting and finance, public policy analysis and implementation, environmental policy and management, health policy and management, urban policy and city management, and collaborative governance.

Both degree programs provide experiential learning opportunities, ensuring graduates effectively apply core skills to management, budget, programmatic and policy challenges in international and national settings.

More than 8,000 departmental alumni are employed in federal, state, and local governments, foundations, private firms, non-governmental and international organizations worldwide. These alumni lead on international and domestic public policy issues. Graduates of the Ph.D. program serve on the faculties of many leading schools of graduate public administration and policy education as well as serve in think tanks and research organizations.

**Sociology Department Overview**

Chair Madonna Harrington Meyer, 302 Maxwell Hall, 315-443-2346, mhm@syr.edu

Graduate Director Andrew London, anlondon@maxwell.syr.edu

**Faculty**

Edwin Ackerman, , Cecilia Green, Madonna Harrington Meyer, Prema Kurien, Andrew S. London, Amy Lutz, Yingyi Ma, Jennifer Karas Montez, Jackie Orr, Arthur Paris, Gretchen Purser, Rebecca Scheue, Nazanin Shahrorki, Merrill Silverstein, , Janet Wilmoth

**Affiliated Faculty**

Peter Blanck, Linda Carty, Richard Loder, Chandra Talpade Mohanty, David Sonnenfeld, Rick Welsh

Global and inclusive in perspective, the Sociology curriculum has been designed to reflect on-going changes in society and the discipline. The graduate program offers training in sociological issues, theory, and practice. It also provides opportunities for joint degrees or collaborative study with many departments, multidisciplinary research centers, and area studies centers at the Maxwell School and in other schools and colleges across the campus.

The department's strength lies in its teaching and research in four major areas: (1) globalization, immigration, transnational studies; (2) health, aging, life course; (3) family, education, work; (4) power, capital, culture. A core theory course incorporates classical foundations of Sociology, as well as more contemporary sociological theory. Students are trained in quantitative methods and statistics, as well as qualitative methods including interviewing, ethnography, and participant observation. After doctoral students complete the core theory, and qualitative and quantitative research methods courses, they pursue advanced study, and develop one or more substantive areas of specialization. This portion of the program is highly individualized and includes some combination of advanced seminars, directed studies, apprenticeships, and participation in Maxwell School programs and research centers.

Although Sociology offers M.A. and Ph.D. degrees,
the program is structured primarily toward students who are pursuing a doctoral degree. The Sociology Department typically admits six to eight new graduate students each year. This small class size allows students to develop a close relationship with faculty members and extensive involvement in departmental activities. Graduate students serve on departmental committees. All graduate students are encouraged to work closely with faculty advisors to develop their own courses of study.

Students are encouraged to develop and present their research at professional meetings and to publish in journals of the discipline, as well as relevant specialty and interdisciplinary journals. Financial support for conference participation is available. Joint publication with faculty members is also encouraged.

In addition to scholarly research activity, the Sociology Department stresses teacher training. Students are active participants in the University's Future Professoriate Program, which helps students develop their teaching skills in a heavily mentored and supportive environment. Most graduates obtain academic positions in teaching and research colleges and universities.

Anthropology, MA

The master of arts degree signifies an important step in a student's scholarly development. The requirements for an M.A. degree in anthropology at Syracuse University emphasize comprehensive understanding of the discipline and the mutual articulation of its constituent subfields.

Required coursework and the qualifying examination reflect the department's intent to expose students to the breadth of anthropology prior to their engaging in more narrowly defined scholarly studies and doctoral research.

1. Credit and core courses requirements:

30 graduate credits that include at least four core courses of which two form a sequence within either the cultural or the archaeological subdiscipline (ANT 611-ANT 711 for cultural students; ANT 641-ANT 741 for archaeology students) and at least two core courses in other subdisciplines.

The core courses are:

- ANT 611 - History of Anthropological Theory 3 credit(s)
- ANT 612 - Ethnology 3 credit(s)
- ANT 631 - Method and Theory in Biological Anthropology 3 credit(s)
- ANT 641 - Anthropological Archaeology 3 credit(s)
- ANT 672 - Language, Culture, and Society 3 credit(s)
- ANT 711 - Current Anthropological Theory 3 credit(s)
- ANT 741 - Archaeological Theory 3 credit(s)

Additional Information

Students are expected to complete core courses and qualifying examinations within the first two years in residence.

2. Qualifying examination:

Successful completion of the qualifying examinations in History of Anthropological Theory and Ethnography for cultural students and Archaeological Method and Theory for archaeology students.

3. Writing requirement:

Students who do not continue beyond the master's level are required to submit a master's paper, which is a significant piece of work on a subject of the student's choosing, and approved by the advisor. Minimally, it should demonstrate original thinking and knowledge of the literature on a given area, topic, or issue. See "Position Papers" for the writing requirements leading to a doctoral degree.

4. Tools and methods requirement:

Cultural students choose either:

- ANT 681 - Ethnographic Techniques 3 credit(s) or
- ANT 684 - Social Movement Research Methods 3 credit(s)

Archaeology students choose one of the following:

- ANT 642 - Methods in Archaeology 3 credit(s) or
- ANT 644 - Laboratory Analysis in Archaeology 3 credit(s)

Archaeological Field training or Field Program

Archaeology students must also fulfill a field training course (ANT 643 - Advanced Field Methods in Archaeology) or complete an accredited archaeological field program.

5. Advisor and master's committee:

Students are expected to select an advisor by December 15 of their second year in residence. (The graduate director will serve as an interim advisor until an advisor is selected.)

Documentary Film and History, MA
the Syracuse University economics department. This includes economics courses at the graduate level transferred from another institution or cognate courses taken in other departments at Syracuse University. The latter may be chosen only in consultation with the advisor. Alternatively, students can conduct independent research under the supervision of a faculty member normally for 3 credits and occasionally for 6 credits. This option requires the student to produce a substantial research paper demonstrating a mastery of relevant economic theory and advanced statistical methods. The cumulative grade point average for the courses taken toward credit for the M.A. degree must be 3.0 or better.

Geography, MA

Program Requirements

The M.A. program in geography gives the student a perspective on the nature of contemporary trends in geography, develops research skills, and provides a beginning to advanced training in the discipline.

The program consists of 30 graduate credits, at least half of which must be at the 600 level or above. The students may write a master’s thesis (which may count for up to six credits) or two master’s papers. The M.A. program assumes a basic foundation in geography, including work in human, environmental, and physical geography, as well as in relevant methods. Students without such a background must do additional work, such as attending courses, auditing, or reading.

The student’s advisor and committee approve the topic for and supervise research and the writing of the master’s thesis. Students electing to write two master’s papers instead of a thesis must have each paper approved by two members of the geography faculty.

History, MA

Program Requirements

The department offers the Master of Arts degree to students who have pursued successfully one of the following programs of study. M.A. students may apply for admission to the Ph.D. program after passing the exam or thesis. The student must complete 30 credits of coursework including three seminars. No more than 12 credits may be taken in undergraduate courses carrying graduate credit. No more than nine credits may be taken outside the department. A 3.0 (B) average is required in all courses. Transfer of credit is subject to Graduate School regulations. Students must complete a language requirement. All students must pass a comprehensive oral examination in one field of history. The student may not enroll for more than 30 credits of coursework prior to taking the examination.

The student completes 24 credits of coursework, a language qualification, and either an oral examination, or a passing thesis, that carries 6 thesis credits. The thesis must be read and approved by the advisor and two other faculty members with whom the student has taken courses.

International Relations

The interdisciplinary Master of Arts in International Relations (MAIR) degree combines the Maxwell School’s long-standing engagement with contemporary world problems with scholarly and practical approaches to addressing them. The degree incorporates an academic study and professional field training to prepare students to address pressing international challenges from positions in the public, non-profit, and private sectors. Over their 16-month period of study, students complete 40 credits of coursework offered by the Maxwell School’s social science departments.

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MAIR Degree Overview

Featuring a global student body, the MAIR degree provides DVS1 rigorous academic and professional training for positions in the public, non-profit, and private sectors. The degree emphasizes an interdisciplinary curriculum drawn from across the social science departments of the Maxwell School. It builds on the research conducted in its internationally-
focused research centers, such as the Program for the Advancement of Research on Conflict and Collaboration, the Institute for National Security and Counterterrorism, and the Daniel Patrick Moynihan Institute of Global Affairs and its seven regionally focused centers. Students may also take courses in other colleges at the University, particularly the College of Law, the Whitman School of Management, the S.I. Newhouse School of Public Communications, and the School of Information Studies, as well as the State University of New York’s New York College of Environmental Science and Forestry (SUNY-ESF).

The MAIR degree requires 40 credits of coursework. All students complete a core curriculum of five courses, to ensure proficiency in international relations theory, economics, management, program and research evaluation, and statistics. By the end of their studies, students will also show significant cultural and linguistic competencies by demonstrating proficiency in a second, modern foreign language.

Students choose one interdisciplinary signature course, which serves as the foundation for a career track specialization in an international relations subfield. These tracks consist of 12 credits of coursework in one of the following areas: peace, security, and conflict, international development, governance and diplomacy, and international trade, as well as a wide variety of area studies of Africa, Asia, Europe, Latin America and the Caribbean, and the Middle East.

Elective courses offer an understanding of the pressing challenges present in the international system. These course options include the Maxwell School’s internationally-focused social science electives or other internationally-focused graduate-level coursework at Syracuse University.

Students pair academic study with practice in the discipline through a required professional internship experience. This internship experience is conducted in Washington, D.C. or overseas through a multitude of Global Program offerings hosted by the Maxwell School or other Syracuse University international partnerships.

International Relations (Executive)
Margaret Lane, Assistant Director, Executive Education
219 Maxwell Hall
315-443-8708
melane02@syr.edu

Program Requirements
The Executive Master of International Relations (EMIR) is open to the midcareer professional with at least seven years of management experience with a current position beyond that of basic supervisor within the public, private, NGO and nonprofit sectors. The program focuses on the global arena, highlighting the opportunities and challenges facing leaders in a dynamic, international environment with an emphasis on updating skills in the field of international relations. Current students are drawn from international government ministries and NGO’s; federal, regional, state and local domestic agencies; and a variety of nonprofit and private organizations. The 30-credit program may be completed in one calendar year of full-time study or in a variety of part-time formats.

The program requires students to form a concentration in topical and regional subfield of international affairs tailored to their professional needs. The degree consists of 10 courses, including three required courses: PAI 895 - Executive Education Seminar: Managerial Leadership, PAI 995 - Master’s Project Course, and the choice either PSC 783 - Comparative Foreign Policy or PAI 713 - Governance and Global Civil Society, depending on whether the student’s study interest focuses on foreign policy analysis or questions around the role that transnational actors play in international relations. The other 21 credits will be divided into three categories: 1) those that constitute a specific career track for the student (9 credits), 2) those that are focused on a particular region of the world (3 credits), and 3) electives from the range of relevant courses offered across the Maxwell School departments (9 credits). Some of these elective courses may be selected, with permission, from another college or school of the University.

The Executive Education Program also administers several certificate programs, which can be pursued concurrently with the EMIR, as well as the option to complete a 51-credit dual EMIR/EMPA program.

Political Science, MA

Program Requirements
The M.A. program requires completing 30 graduate credits, including one methodology course selected from PSC 693, PSC 694, PSC 796, or an alternative course approved by the Director of Graduate Studies. No more than 9 credits may be earned at another institution. Students may write a thesis (6 Credits). The choice must be made by the end of the first semester. The thesis topic and advisor must be approved by the Director of Graduate Studies. Whether electing to write a thesis or not, the degree can be earned within one year. Students must maintain at least a 3.0 grade point average, and their credits may include courses from other departments in the University. Since master’s candidates have diverse career goals, ranging from government service to teaching to working in the private sector, the department allows considerable flexibility in course selection.

Public Administration (Executive)
Margaret E. Lane Assistant Director, Executive Education
219 Maxwell Hall
315-443-8708
melane02@syr.edu

Major Requirements
The Master of Public Administration M.PA. degree emphasizes professional education for future public service leaders. By offering a variety of fields in which a student can gain substantive focus while obtaining training in public administration and policy, the degree responds to the needs of tomorrow’s managers and policy analysts. Students have access to Syracuse University’s graduate courses as well as those at the State University of New York College of Environmental Science and Forestry. Working with advisors, students have ample opportunity to create an individualized appropriate programs of study.

MPA Degree Overview
The degree requires a residency of 12 to 18 months. All students begin the program in early July. Full-time students complete the program the following June.

The MPA degree requires 40 credits of coursework. 25 of these credits satisfy core requirements, ensuring proficiency in economics, quantitative analysis, organization and management theory, public budgeting and finance, and the political context of public management.

Additional elective coursework satisfies the remaining 15 credits. These elective courses may be selected from the public administration and international affairs department, other Maxwell School social science departments, or elsewhere in the University.

Degree requirements are flexible enough to allow a student to design a program in state and local government, financial management and analysis, public and nonprofit management, international development administration, environmental policy and administration, international and national security policy, health management and policy, and social policy while completing the MPA core requirements.

Public Administration
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, College of Engineering and Computer Science, the College of Law and the David B. Falk College of Sport and Human Dynamics. The program is designed to prepare students in the basic knowledge areas in public health through a core curriculum of required courses; extend that knowledge through elective coursework and through practical skills honed in field experiences; and demonstrate an integration of that knowledge through a culminating experience. The basic knowledge areas include: biostatistics, epidemiology, environmental health, health policy and management and social and behavioral sciences. A minimum of 42 credits is required for the degree, consistent with the accreditation criteria for public health programs promulgated by the Council on Education for Public Health.

The M.P.H. student body consists of individuals with a variety of backgrounds and preparations, including students directly out of undergraduate school with a relevant baccalaureate degree as well as professionals with graduate degrees and significant work experience in public health administration or clinical care. Students will be prepared for career opportunities in public health administration, leadership roles in private agencies involved in public health delivery and advocacy, research, and clinical care broadened by an understanding of the health care delivery system and grounded in public health practice.

Admission

Students interested in the M.P.H. must complete an application online at:

http://www.upstate.edu/cnymph/academic/

has been approved by their committee, they are expected to carry out the project and write a dissertation based on this research.

1. Basic requirements:
   - 72 graduate credits (past B.A.) as follows:
     - Minimum of 33 credits in anthropology
     - Maximum of 27 credits in cognate fields
     - Maximum of 12 “dissertation” credits
     - Completion of core courses (or the equivalent- see M.A. guidelines)
     - Satisfactory completion of the qualifying examination

2. Students with a Prior Master's Degree

   2. Students with a prior master's degree must fulfill all core courses and qualifying requirements (see M.A. guidelines). This may be accomplished through satisfactory completion of required coursework, the qualifying examination, and other means approved by the Graduate Committee (petition to the graduate director is required).

3. Tools and methods requirement:

   Cultural students must satisfy the tools and methods requirements for the M.A. plus show proficiency in a language of international scholarship, a literary language, or a field language.

   Archaeology students must satisfy the tools and methods requirements for the M.A. plus show proficiency in a language of international scholarship, a literary language, a field language, or in managing electronic databases and other computer programs for data processing.

4. Dissertation committee:

   The Ph.D. student is responsible for forming a committee that will guide and preside over the doctoral dissertation. The committee is composed of five members, including the student's principal advisor and at least two other faculty members from the department. At the discretion of the advisor, one member of the committee may be chosen who has no affiliation with Syracuse University.

   To facilitate communication and encourage progress towards completion of their doctoral degree, students should meet with their advisor and doctoral committee at least once a year following the selection of an advisor and committee, with the meeting normally held in the spring term. The meeting will be organized by the student and advisor and may include remote participation if necessary.

5. Position papers:

   Doctoral students are required to write three
position papers on topics selected in consultation with the student’s advisor and committee. The position papers are intended to demonstrate the student’s competence in a) the geographical area and focal context of specialization, b) the topic of specialization (local and cross-cultural perspectives on a specific research topic), and c) a specific research problem. The position paper should be the student’s original synthesis of the specialized literature in each of the three areas. The ideal paper would be one that could be published in the Annual Review of Anthropology. Position papers may be written and submitted (in consultation with the student’s core committee) at any time beginning in the student’s third term of residence. They must all be completed and approved before a formal research proposal may be defended.

6. Dissertation proposal and proposal defense:

Doctoral students must submit a dissertation proposal to their dissertation committee, and successfully defend it during an oral examination. The dissertation proposal should be a substantive piece of work demonstrating competencies in theory, method, topic, and geographic area sufficient to support the proposed research.

7. Dissertation and dissertation defense:

The dissertation is an original and substantial written report on the student’s doctoral research. Completed dissertations are subject to a formal dissertation defense.

Economics, PhD

The Ph.D. in economics at Syracuse is a research-oriented degree, designed for those who want to do applied economics in high education, government, international agencies, independent research organizations, or private businesses with a substantial research mission.

Entering graduate students should have had at least one year of calculus, a course in mathematical statistics, and a course in linear algebra. In their class work, Ph.D. students take a course in mathematical economics, three courses in microeconomic theory, two courses in macroeconomic theory, three to four courses in econometrics, fulfill the requirements in two fields, as well as breadth requirements and electives totaling 51 credits. Counting dissertation hours, the total number of credits in the program is 72 hours. Students may choose two fields from among labor economics, international economics, public economics, urban economics and econometrics. Students with particularly strong theoretical interests may take fields in microeconomic theory, macroeconomic theory. A student with strong interest in finance may take a field in it through the finance department of the School of Management. A student wishing to take a field in an area other than microeconomics, macroeconomics, econometrics, labor economics, public economics, international economics, or urban economics must receive the explicit approval of the director of graduate studies of the economics department.

Faculty and graduate students work closely in research, teaching, and graduate study. For example, Ph.D. students often write papers for journals and conferences with faculty members. In addition, some graduate students participate in a special University program that helps form good teaching practices. Syracuse University is one of a few universities that provides graduate students with a formal program to learn about college-level teaching practices.

Admissions Requirements

Applications from all interested individuals are welcome. Present graduate students have varied undergraduate backgrounds, including economics, physics, and mathematics. Completion of a master’s degree in economics is not required to enter the Ph.D.

Persons interested in studying for the Ph.D. should complete the application form found in the Maxwell School catalog or on the web site, www.maxwell.syr.edu, and have three letters of recommendation sent on their behalf. In addition, all applicants should submit their scores from a recent general Graduate Record Examination and transcripts of all collegiate and post-collegiate work. Applicants whose first language is not English should submit the results of a recent TOEFL examination. Preference for graduate assistantships is given to students with TOEFL (iBT) scores of 100 and above.

Financial Support

Merit-based financial aid awards are available to support study in the Ph.D. program in the form of fellowships and graduate assistantships. Financial support is renewed each year for five years of study, subject to maintaining satisfactory performance in the Ph.D. program. The deadline for submitting applications for a University Fellowship or the deadline for a graduate assistantship is January 17, 2017, although later applications are considered for the assistantship awards. Candidates for admission who do not require University financial support may apply at any date.

Fellowships

Fellowships Economics applicants compete with applicants to other departments at Syracuse University for University Fellowships. Winners receive a fellowship in their first and fourth years of study and receive graduate assistantships in their second, third and fifth years. Fellowships include a stipend of approximately $24,310 (2015-16) and a full-tuition scholarship for 30 credits for the academic year. Students receiving a fellowship have no service responsibilities to the University during the years that they are on the fellowship. Recipients generally take 12 credits each semester that they are on fellowship. Fellowship recipients can opt to have University health care insurance coverage at a modest fee. Fellowship stipends are taxable under the state and federal government laws.

Graduate Assistantships

The economics doctoral program provides opportunities to obtain teaching experience and to participate in research projects with faculty. Most entering and continuing graduate students have teaching assistantships. All teaching assistants participate in a unique Teaching Assistant Orientation Program conducted by the Graduate School. As a teaching assistant, students eventually gain experience in all aspects of teaching, from exam preparation and grading to lecture preparation and presentation. Some advanced doctoral students conduct their own classes, usually teaching at Syracuse University Continuing Education (SUCE).

Advanced graduate students may elect to compete for research assistant positions. Research assistantships are available, for example, through the Center for Policy Research, a research institute within the Maxwell School, or through faculty members who have externally sponsored research projects. In fact, many students serve as both teaching and research assistants during their time in the doctoral program.

Graduate assistantships are renewed each academic year on the basis of satisfactory progress in the Ph.D. program and of the recent performance as a teaching or research assistant. Assistantships include a stipend of $18,650 for the 2016-2017 academic year. Graduate assistants can opt to have University health care insurance coverage at a modest fee. Assistantships require up to 20 hours of service per week in teaching, grading, or research. A full graduate tuition scholarship for 24 hours of coursework per year is also awarded with the assistantship. Students with assistantships take 9 hours of courses during each semester, and students should use their remaining 6 hours during the summer to register for additional courses or for dissertation credits.

Graduate stipends are subject to tax by state and federal governments but, at this time, are not subject to the social security payroll tax.

Summer Support

The economics department offers opportunities for teaching, research, and summer fellowship support. Summer funding is also available to graduate students through externally funded research projects. All summer support is subject to taxation by the state and federal governments but, at this time, is not subject to the Social Security payroll tax.

Degree Requirements

The Ph.D. degree in Economics at Syracuse is designed to be completed in five years. After 30 credits of graduate coursework in economics, students in the Ph.D. program should file for a master’s degree in economics. That process begins in the department office.

The program consists of three stages:
completeness of graduate coursework with an average grade of 3.0 or better, (2) satisfactory performance on the two qualifying examinations and the field comprehensive examination(s), and (3) submission and successful defense of the dissertation. In practice these stages are intermingled, but it is useful to describe them separately.

**Coursework**

For students entering with no prior graduate work, the coursework generally consists of 2 1/2 to 3 years (51 credits) of graduate course credits and 21 hours of dissertation credit hours. The program builds on a set of core courses and includes elective courses that allow for breadth of study in economics. The core courses include:

- **ECN 601 - Survey Microeconomic Theory 3 credit(s)**
- **ECN 611 - Microeconomics I 3 credit(s)**
- **ECN 612 - Microeconomics II 3 credit(s)**
- **ECN 613 - Macroeconomics I 3 credit(s)**
- **ECN 614 - Macroeconomics II 3 credit(s)**
- **ECN 605 - Mathematics for Economists 3 credit(s)**
- **ECN 620 - Foundations of Econometrics 3 credit(s)**
- **ECN 622 - Econometrics II 3 credit(s)**
- **ECN 621 - Econometrics I 3 credit(s)**
- **ECN 613 - Macroeconomics I 3 credit(s)**

**Additional Information**

In addition to the core courses, each student studies two fields, in which they develop considerable expertise. The coursework beyond the core is applied toward the field courses and the fulfillment of program breadth requirements.

**Field Coursework:**

Two Ph.D.-level courses in each field. Students supplement with related courses offered in the department.

**Breadth Requirement:**

This consists of two courses outside of the student's two main fields.

**Two-Breadth Requirement**

The two-breadth requirement may be satisfied by ECN 720 (Advanced Econometrics) and other courses offered in economics fields or at Syracuse University. Students should consult about fulfilling the breadth requirements with the graduate studies committee as well as with other economics faculty members who may serve as graduate advisors.

A typical course schedule for a student on a graduate assistantship is as follows:

### Course Schedule

A typical course schedule for a student on a graduate assistantship is as follows:

#### Summer 2016
- **ECN 605 - Mathematics for Economists 3 credit(s)**
- **ECN 620 - Foundations of Econometrics 3 credit(s)**

#### Fall 2016
- **ECN 601 - Survey Microeconomic Theory 3 credit(s)**
- **ECN 621 - Econometrics I 3 credit(s)**
- **ECN 613 - Macroeconomics I 3 credit(s)**

#### Spring 2017
- **ECN 611 - Microeconomics I 3 credit(s)**
- **ECN 622 - Econometrics II 3 credit(s)**
- **ECN 614 - Macroeconomics II 3 credit(s)**

#### Summer 2017
- Examinations in Micro and Econometrics

#### Fall 2017
- **ECN 612 - Microeconomics II 3 credit(s)**
- **ECN Field I, Course 1**
- **ECN Field II, Course 1**

#### Spring 2018
- **ECN Field I, Course 2**
- **ECN Field II, Course 2**
- **ECN 820 - Dissertation Workshop I 3 credit(s)**

#### Summer 2018
- Field Examination, Dissertation hours

#### Fall 2018
- **ECN 821 - Dissertation Workshop II 3 credit(s)**
- **ECN Breadth**
- **ECN Breadth**

#### Spring 2019
- The fourth and fifth years are dedicated to dissertation research and writing. Students with graduate assistantships should register for up to six dissertation hours or take courses during the summer semesters. Students on fellowships follow a modified schedule from that just outlined.

### Examinations

**Qualifying Examinations**

Students take two comprehensive qualifying examinations in areas of microeconomic theory and econometrics; and a comprehensive examination in one of the fields. Students not passing an examination are able to retake it once. Progress toward the degree and grades to that date generally determine whether the student is advised to continue in the Ph.D. program.

**Qualifying Examination**

Students take the qualifying examination in the summer, after one year of study. By that time, students will have completed courses in Microeconomic Theory (ECN 601, ECN 611) and Macroeconomic Theory (ECN 613, ECN 614) and Econometrics (ECN 620, ECN 622).
Field Examinations

Normally, students take a comprehensive examination in their primary field in the summer after their second year of study. The fields (primary and secondary) may be fulfilled through coursework if the course grades are high enough, or through a comprehensive examination. Students will normally take the field examinations at the next scheduled sitting following the completion of the field course sequence (even if a grade of incomplete is recorded). Not taking the examination at the next scheduled sitting will count as a failure.

Field 1: At least two courses must be completed in the primary field. The exact sequence of courses varies according to field. Grades of B or better in both courses are required to take the comprehensive examination in the field.

Field 2: At least two courses must be completed in the second field. If the student receives an average grade of B+ or better in the coursework for the second field, the requirements for the second field are complete. Students without a B+ average in the coursework will take a comprehensive examination in the second field or follow some other approved remedial action.

Separate arrangements for examination are made when a student takes a field in economic theory.

Dissertation

Our program is designed so that students begin planning dissertations during their third year (or earlier) and finish them during their fifth year. Students are also required to write an acceptable dissertation containing a contribution to knowledge, conforming to professional standards of evidence and argument, and presented in clear and correct language. After completion, the dissertation must be successfully defended in an oral examination. Students must provide all members of the guidance committee a complete draft of their dissertation no later than one month before the scheduled date of the oral examination.

Dissertation Workshops I and II In Dissertation Workshop I, ECN 820, students learn essential research skills, develop a dissertation proposal, and write basic dissertation chapters. Dissertation Workshop II, ECN 821, is a seminar with students presenting dissertation research in progress.

Satisfactory Progress

Only students making satisfactory progress are eligible for departmental support. A student is making satisfactory progress as of the beginning of the second year if he or she has

- passed all first year core courses;
- maintained a cumulative average of 3.0 or better;
- earned a grade point average of 3.0 or better in ECN 613 and ECN 614; and
- passed both the econometric and microeconomic qualifying examinations

A student is making satisfactory progress at the beginning of the third year if he or she has

- passed all second year core courses;
- maintained a cumulative average of 3.0 or better; and
- passed his or her preliminary field comprehensive examination

A student is making satisfactory progress at the beginning of the fourth year if he or she has

- maintained a cumulative average of 3.0 or better; and
- completed his or her secondary field requirements

Geography, PhD

Program Requirements

Students entering the Ph.D. program with master's degrees from other universities are expected to have or acquire qualifications equivalent to those normally achieved by a Syracuse M.A. in geography. The student must maintain a 3.0 grade point average. The Ph.D. degree requires a total of 72 credits of approved graduate work in geography and related fields. The 72 credits include credits accepted for the master's degree, and 12 credits in dissertation research. At least 24 credits of coursework must be taken in residence at Syracuse. At least two-thirds of the coursework (not including the dissertation) must be at the 600 level or above. All doctoral programs in geography are research-oriented.

Toward the end of their second year in the Ph.D. program, students must submit a dissertation proposal to their advisory committee. The proposal must be approved by the committee in a formal defense prior to taking the qualifying exams. Following the completion of coursework and the defense of the dissertation proposal, Ph.D. students must take their qualifying exams, designed to demonstrate competence in three topical fields. The exam has a written and an oral portion, designed to cover the specific subfields identified by the student in consultation with the advisor and advisory committee.

The dissertation itself should be an original scholarly contribution to the field and may be highly varied in methodology, topic, and style of presentation. It must be defended orally.

History, PhD

Program Requirements

The Ph.D. in history requires a broad knowledge of several fields of history. This knowledge must be acquired through the independent initiative of the student under the direction of the faculty. The Ph.D. requires at least three years of full-time study or its equivalent. Normally, 48 credits (including the credits offered for the M.A.) of coursework are required. Students generally take an additional 24 hours of dissertation research credits. No more than 12 credits may be taken in undergraduate courses carrying graduate credit. A 3.0 (B) average must be maintained.

Languages

The department requires knowledge of one foreign language. Individual advisors may require knowledge of one additional language. Language requirements are fulfilled by passing a standardized departmental exam. Coursework taken in support of a language requirement may not be included in the 48 credits of coursework required for the Ph.D., but may be counted as part of the total 72 credits for the Ph.D. Doctoral students must complete one language requirement during the first year of graduate study. A second language requirement, if required, must be completed before taking oral comprehensive exams.

Fields

At the beginning of graduate work, M.A. candidates with their advisors should select a field of specialization in which they will take a comprehensive oral examination or write a thesis at the completion of their hour requirements. Students working toward a Ph.D., in consultation with their advisors, should select a major field in which they plan to write their dissertations. They should also select two specific fields. Two of the three fields offered must be in history. Specific major fields currently offered by the department include:

- Africa - Pre-Colonial, Modern
- East Asia - Pre-Modern China, Modern China, Pre-Modern Korea, Modern Korea
- Europe - Ancient, Medieval, Early Modern, Modern
- Latin America - Modern, Colonial, Mexico, Caribbean
- United States - Early North America, Modern United States, Women, Religion, Native American, African American
- South Asia - Modern and Contemporary
- Thematic - Empire, Nation and Citizenship; Labor and Social Movements; Mediterranean World; Modern Atlantic; Political Violence; Intellectual History;
- Crime, Law and Deviance; Gender and Sexuality; Race and Ethnicity; Religion and Society

Examinations

Ph.D. students take an oral examination in their major and specific fields. Upon successful completion of these exams, students also must pass an oral defense of the dissertation proposal.
Dissertation
Each candidate for the Ph.D. must complete and defend a dissertation.

All students are to adhere to the History Department Graduate Rules and Regulations and Syracuse University’s regulations.

Political Science, PhD
Program Requirements
In the spring semester of the first year, graduate students in political science are evaluated on the basis of their performance in courses. A student invited to remain in the program to work toward a Ph.D. must complete 51 credits of graduate coursework and 21 dissertation credits, with a 3.0 or higher grade point average.

Ph.D. students are required to take PSC 691, PSC 693, PSC 694, PSC 792, and at least one additional methods course approved by the Director of Graduate Studies. Once 30 credits of coursework are accumulated, a student working toward the Ph.D. will be eligible for the M.A.

Students having done graduate work at another institution may petition to transfer a maximum of 24 credits toward the Ph.D.

Ph.D. students must pass qualifying examinations in two chosen fields of specialization, generally by the end of the third year. Students must also write and defend a doctoral dissertation.

Public Administration, PhD
The Ph.D. program is designed for full-time residential students who are interested in scholarly careers as researchers and teachers. All aspects of the program are focused on providing Ph.D. students high quality research and teaching experiences. The curriculum is designed to assure that all students:

- Gain substantial competency in the core subject matter and methodologies central to preparing for careers as public administration and policy scholars and researchers
- Obtain a firm understanding of the broad intellectual tradition of public administration and policy analysis
- Become active researchers beginning in their first year of the program

Ph.D. Requirements
Doctoral studies in Public Administration provide interdisciplinary study of public management and public policy analysis. PhD students complete 72 graduate course credits plus nine dissertation credits. Requirements for admission include an MPA or related master's degree. Up to 36 credits earned in previous graduate study may be used to satisfy the program’s 72 course-credit requirement (39 credits for Maxwell MPA students). All students complete at least three credits in the foundations of public administration, three credits in the foundations of public policy analysis, nine credits in research methods, and 12 credits in two fields of specialization (six in each).

Fields of specialization currently offered are: public finance, budgeting and financial administration; organization theory and public management; technology and information policy; nonprofit studies; development policy and administration; environmental and natural resource policy; and social policy.

Students have the option of substituting a field of their own design for one of the two required fields of specialization, subject to faculty approval. All PhD students in good standing serve as graduate assistants during the first two years of residence. Graduate assistants work with faculty on research projects and course related activities. Participation in the University’s Teaching Assistant Training Program is also required just prior to the start of the initial fall semester.

Upon completion of required coursework and the research apprenticeship, comprehensive examinations are taken, followed by preparation of a dissertation that must be defended in an oral examination.

Social Science, PhD
Chair
Vernon Greene
413 Maxwell Hall
315-443-2275
Administrative Assistant
Tammy Salisbury
413 Maxwell Hall
315-443-2275

The Maxwell School’s Social Science Ph.D. Program was established in 1946 as the nation’s first interdisciplinary doctoral program in the social sciences. It continues to be a leading center for creative scholarship for students whose intellectual interests do not easily fit within the confines of a single social discipline. With guidance from their faculty advisers, drawn from departments throughout the Maxwell School, Social Science doctoral students develop their own programs of interdisciplinary study. The Social Science Ph.D. Program was founded in the conviction that a broad interdisciplinary education would often better prepare higher education faculty in the social and policy sciences than would narrower, more specialized training in one of the traditional disciplines. The founders of the program believed that many questions about the nature of society rested not just in one discipline, but required the integrated contributions of political science, geography, sociology, anthropology, history, international relations, economics, and public administration. This conviction is today being even further reinforced by the growing complexity and interdependence of societies in the modern world. A large majority of graduates take up professorial careers at colleges and universities, though some enter professional and leadership positions in the private, nonprofit and public sectors.

Social Science Ph.D. Degree Requirements
Coursework requirements for the Ph.D. in Social Science are met by completing 72 credit hours of approved graduate work. Students normally enter the program with an accredited masters degree, from which up to 30 credit hours can be applied towards the Ph.D., leaving 42 credit hours to be earned in residence. Up to 12 of these credit hours may be for dissertation credit.

All students must complete four approved seminars in Social Theory and four in Social Research Methods, which may be taken in any of the social science departments or disciplines. For this purpose, a Theory seminar is one whose primary topic is social theory as such, and a Methods seminar is one whose primary topic is research methods as such. As a practical matter, any seminar that is part of the required doctoral theory core for the offering department will usually also qualify towards satisfying the Social Science theory requirement, and similarly for research methods seminars. Once coursework is completed, students defend their dissertation proposal and take their comprehensive examinations - after success in these, they are advanced to candidacy and begin or continue their dissertation project. The Ph.D. is granted after a successful defense of the dissertation.

Sociology, PhD
Program Requirements
Students are admitted to the Ph.D. program upon successful completion of the master's degree requirements and recommendation of the faculty. Coursework is flexible and individualized. A total of 72 credits beyond the bachelor's degree is required to obtain the Ph.D., including at least 45 credits of graded coursework and at least 9 dissertation credits.

The areas of concentration include globalization, immigration, transnational studies; health, aging, life course; family education, work; power, capital, culture. Students are encouraged to gain teaching and research experience. They may do this through a teaching assistantship, participating in one of the several multidisciplinary research centers of the Maxwell School, or undertaking joint projects with faculty members.

Students normally take the Ph.D. comprehensive examinations after the third year or after two years if they entered with an M.A. degree. The examination covers theory, methods, and substantive areas in the broad context of Sociology and in the student's dissertation field(s). Students must also pass one advanced course in research methods beyond the required courses. Examples that would satisfy this requirement are courses on advanced statistics, advanced qualitative techniques, or historical methods.

Finally, students must conceive, execute, present, and defend a doctoral dissertation proposal and a completed dissertation.
International Relations/ Public Administration, MA/MPA

An approved 58-credit joint degree program between International Relations and Public Administration is available to students and may be completed in a two-year period.

Law/History, JD/MA

Degree Requirements

The Juris Doctor/Master of Arts in History is a joint degree which may be conferred by the College of Law and the Syracuse University Department of History. The students enrolled in this program may obtain their J.D. and M.A in History in substantially less time than would be necessary if both programs were separately pursued. Candidates for admission to the joint degree program must first gain admission to the regular program of each participating academic unit.

Questions and inquiries may be directed to Susan Branson, Professor of History and Director of Graduate Studies, Department of History, 145 Eggers Hall, 443-4144, branson@syrsy.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 444 College of Law, 443-1146, cabbotth@law.syr.edu.

Law/International Relations, JD/MA

Degree Requirements

The Juris Doctor/Master of Arts in International Relations is a combined degree which is conferred by the International Relations program of the Maxwell School of Citizenship and Public Affairs and the College of Law. This joint degree program offers students a unique opportunity in developing the knowledge and skills necessary to enter into a career in the international field, including a basic social science understanding of international relations as well as contemporary features of international affairs. The student may specialize in a specific area of interest such as Global Markets, International Economics, Finance and Trade; Peace, Security and Conflict; Governance, Diplomacy and International Organizations; Democracy, Development and Humanitarian Assistance; and Regional concentrations in Africa, Asia, Europe, Latin America, the Caribbean, and the Middle East.

Students also complete an applied internship opportunities linking academic studies in law and international relations with the professional practice of international relations.

Questions and inquiries may be addressed to Christine Omlino, Director, Admissions and Financial Aid, Department of Public Administration and International Affairs, 215 Eggers Hall, Maxwell School of Citizenship and Public Affairs (443-4000; comolino@syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/Political Science, JD/MA

Degree Requirements

The Juris Doctor/Master of Arts and Juris Doctor/Doctor of Philosophy in Political Science are joint degrees which may be conferred by the College of Law and the Syracuse University Political Science Department. Students enrolled in these programs may obtain their J.D./M.A. or J.D./Ph.D. in Political Science in substantially less time than would be necessary if both programs were separately pursued.

Questions and inquiries should be directed to Professor Seth Jolly, Director of Graduate Studies, (skjolly@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Academic and Bar Support, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/Political Science, JD/PhD

Degree Requirements

The Juris Doctor/Master of Arts and Juris Doctor/Doctor of Philosophy in Political Science are joint degrees which may be conferred by the College of Law and the Syracuse University Political Science Department. Students enrolled in these programs may obtain their J.D./M.A. or J.D./Ph.D. in Political Science in substantially less time than would be necessary if both programs were separately pursued.

Questions and inquiries should be directed to Professor Seth Jolly, Director of Graduate Studies, (skjolly@maxwell.syr.edu). Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Academic and Bar Support, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Law/Public Administration, JD/MPA

Joint and Concurrent Degree Programs

A joint program with the College of Law allows students who have been admitted into each program to earn the M.P.A. and J.D. degrees in a three-year period. A 58-credit joint degree program with International Relations is also available to students and may be completed in a two-year period. Students may arrange similar concurrent degree programs with the M.P.A. program and other departments and colleges of the University, such as environmental science and forestry, economics, geography, social work or management.

Law/Public Administration, JD/MPA

Degree Requirements:

A longstanding and popular joint degree exists between the Department of Public Administration of the Maxwell School for Citizenship and Public Affairs and Syracuse University's College of Law. Students prepare for a career at the nexus of law and public administration with the JD/MPA degree. Students must apply and be admitted to both programs separately and will complete the entire first year in the College of Law prior to matriculation into the MPA degree. Due to the calendar nature of the MPA program, this challenging joint degree, one of the oldest of its kind anywhere, can be completed in three years (the same time needed for a JD alone).

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (315-443-1146, cabbotth@law.syr.edu).

Public Administration, JD/MPA

Joint and Concurrent Degree Programs

A joint program with the College of Law allows students who have been admitted into each program to earn the M.P.A. and J.D. degrees in a three-year period. A 58-credit joint degree program with International Relations is also available to students and may be completed in a two-year period. Students may arrange similar concurrent degree programs with the M.P.A. program and other departments and colleges of the University, such as environmental science and forestry, economics, geography, social work or management.

Public Diplomacy, MS/MA

Contact:

Dennis F. Kinsey, Director
452 Newhouse 3, 315-443-3801
http://publicdiplomacy.syr.edu/

Faculty

See faculty listing under Public Administration and International Affairs in the Maxwell School of Citizenship and Public Affairs and under Public Relations in the S.I. Newhouse School of Public Communications.
The Maxwell School of Citizenship and Public Affairs and the S.I. Newhouse School of Public Communications offer a multidisciplinary graduate program leading to the Master of Arts (M.A.) degree in International Relations and the Master of Science (M.S.) degree in Public Relations. This dual-degree program is offered jointly by the Maxwell School's Department of Public Administration and International Affairs and the Newhouse School's Department of Public Relations. It is designed to train professionals to assume public communications responsibilities for governments, non-governmental organizations, and the private sector.

Program Requirements
Successful completion requires 58 credits of coursework. The program begins in early July with a summer-long gateway seminar, introducing students to the fields of public diplomacy, public communications, and their cross-disciplinary synthesis. During the fall and spring semesters, students take courses at the Maxwell and Newhouse Schools. The following summer, students complete an off-campus experience at one of several locations around the world. Students resume coursework in the second fall semester and finish the program that spring in Washington, D.C., where they complete a required internship and attend two special seminars addressing issues in public diplomacy and public communication at the Maxwell School's home in Washington, DC, the Center for Strategic and International Studies. Graduation requirements include demonstrating proficiency in a foreign language.

Required courses at the S.I. Newhouse School of Public Communications

Communications
- COM 698 - Media Law 3 credit(s)

Graphic Design
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)

Public Relations
- PRL 602 - Introduction to Public Diplomacy and Communications 3 credit(s)
- PRL 605 - Public Relations Theory 3 credit(s)
- PRL 607 - Advanced Public Diplomacy 3 credit(s)
- PRL 608 - Public Relations Writing 3 credit(s)
- PRL 611 - Public Relations Research 3 credit(s)
- PRL 615 - Public Relations Campaign Planning & Execution 3 credit(s)
- PRL 725 - Public Relations Management 3 credit(s)
- PRL 735 - Public Relations Practicum 3 credit(s)

Required Courses at the Maxwell School of Citizenship and Public Affairs

Public Administration and International Affairs
- PAI 706 - International Relations Capstone Seminar 1 credit(s)
- PAI 708 - Issues for 21st Century Public Diplomacy 3 credit(s)
- PAI 709 - Research Consultancy in Public Diplomacy 3 credit(s)
- PAI 710 - International Actors and Issues 3 credit(s)
- PAI 720 - Principles of Economics 3 credit(s)
- PAI 721 - Introduction to Statistics 3 credit(s)

Other Required Courses:
During their studies, students must complete a three-credit summer internship as well as six credits towards a distinct international relations career track, as well as one of the following five International Relations signature courses.
- PAI 707 - Culture in World Affairs 3 credit(s)
- PAI 716 - Economic Dimensions of Global Power 3 credit(s)
- GEO 606 - Development and Sustainability 3 credit(s)
- HST 645 - History of International Relations 3 credit(s)
- PSC 783 - Comparative Foreign Policy 3 credit(s)

Summer off-campus internship program (and career track course) 6 credits
Career Track Course 3 credits

Total: 58 credits

Civil Society Organizations, CAS

Contact:
Tosca Bruno-van Vijfeijken, tmbruno@maxwell.syr.edu

This certificate is based on 15 hours of coursework that includes a foundational course, discipline-specific coursework, an internship/fieldwork requirement, and a prosemear.

Foundational Perspectives Course (3 credits)
Take one of the following courses, or another course approved by the director of the certificate program:
- ANT 707 - Culture in World Affairs 3 credit(s)
- PAI 748 - Seminar on Nonprofit Management 3 credit(s)
- PAI 765 - Humanitarian Action: Challenges, Responses, Results 3 credit(s)
- PAI 763 - NGO Management in Developing and Transitioning Countries 3 credit(s)

Discipline-Specific Coursework (6 credits)
The student, in consultation with the program director, must complete at least 6 credits of discipline specific coursework. To fulfill this requirement, the student will choose courses that are included in the program (the TNGO's course listings) or, with approval, they may draw upon graduate courses offered in their own department which are relevant to the topics of non-state actors and civil society or which help them to develop research skills in this area.

Internship/Fieldwork Requirement (3 credits)
Students must either participate in an internship program with a non-governmental organization or engage in research field work (in this case they would need to register for an independent study course) in an organization, before completing the certificate program. In either case the program director must approve the internship or fieldwork proposal as being relevant to the certificate program. MPA students may use the MPA capstone projects to fulfill their fieldwork/internship requirement.

Proseminar (3 credits)
The course (PAI 713 - Governance and Global Civil Society) will cover the wide range of perspectives and literatures on global civil society organizations and transnational NGOs and attempt to integrate these literatures through critical analysis. The course is designed to familiarize students with the organizational challenges facing these actors (coordination, accountability, impact assessment) as well as with the functions they perform.

Administration
The Certificate Program is administered by the Moynihan Institute of Global Affairs in the Maxwell School; the program's director is Prof. Margaret Hermann. She can be reached at mgherman@
Conflict Resolution, CAS

Certificate Requirements

The 12-credit, graduate-level certificate is an educational program that allows students to engage in more in-depth study of conflict theory, concepts, and skills. To earn the certificate, students complete a required 3-credit course in the Fundamentals of Conflict Studies and 9 additional credits of graduate coursework selected from a list of accepted courses. Students may complete a general program of study, or they may concentrate their classes in one of five specialized areas of study: (1) Applied Dispute Resolution and Conflict Management; (2) Advocacy and Social Movements; (3) Collaborative Governance; (4) Environmental Public Participation and Conflict; or (5) Transnational Conflicts.

Students already in a graduate program earn the Certificate as part of their master's or doctoral degree, and the Certificate is awarded concurrently with the degree. Mid-career managers may complete the Certificate as an independent graduate program.

Questions about certificate paperwork contact PARCC's Records and Publications Coordinator, phone 315.443.2367, mailto: datoole@maxwell.syr.edu.

Econometrics, CAS

Contact:
Pinyuen Chen (pinchen@syr.edu)

The application of statistics to economics is commonly called econometrics. Statistics and econometrics have become more closely associated as scholars and practitioners in both areas have learned from each other and adopted ideas learned in the other area. Given this convergence, a certificate offered by Syracuse University that requires knowledge of the contributions of both disciplines is both timely and appropriate.

Certificate Requirements

To obtain the certificate a student must successfully complete:

- ECN 621 - Econometrics I 3 credit(s)
- ECN 622 - Econometrics II 3 credit(s)
- ECN 720 - Topics in Econometrics 3 credit(s)
- MAT 651 - Probability and Statistics I 3 credit(s)
- MAT 652 - Probability and Statistics II 3 credit(s)

European Union & Contemporary Europe, CAS

Margaret G. Hermann
Professor of Political Science

and Gerald B. and Daphne Cramer Professor of Global Affairs Director,
Moynihan Institute of Global Affairs
Office: 345 Eggers Hall
Telephone: 315-443-4022
Fax: 315-443-9085
E-mail: mgherman@maxwell.syr.edu

The Certificate of Advanced Study in the European Union (EU) and Contemporary Europe is available to students in all professional and doctoral programs at Syracuse University who are looking to supplement their degree with a strong foundation in this region's politics and culture or to prepare themselves for a career involving specialization in this region. In completing the certificate program, students are required to take at least 12 credit hours of study focused on the region, including one of the required courses and nine credits from a set of approved courses and/or approved other activities such as internships, independent study or capstone experiences. For more information, visit the program website:

http://www.maxwell.syr.edu/moynihan/merc/Graduate_Certificate_in_the_EU_and_Contemporary_Europe/

Admission:

Admission to this certificate program is open to all graduate students enrolled in Syracuse University interested in learning more about and acquiring a specialization in the European Union and contemporary Europe. Interested students are encouraged to interact with the director of the certificate program early in their tenure to develop a program of study as well as to complete the Graduate School’s Internal Admission form enrolling in the program.

Program Requirements:

Twelve credits in four courses must be earned to be eligible for the certificate. These must include:

The choice of one of the required courses:

- PSC 756 - Politics of the European Union 3 credit(s)
- PSC 600 - Selected Topics 1-6 credit(s) The EU and Beyond: Identity, Politics, and the New Europe *
- ANT 670 - Experience Credit 1-6 credit(s) The Culture and Politics of Reconciliation in Central Europe **
- HUM 670 - The Culture and Politics of Reconciliation in Central Europe **
- SOC 670 - Experience Credit 1-6 credit(s) The Culture and Politics of Reconciliation in Central Europe **

Elective Courses and/or Approved Other Activities

Nine credits from a set of elective courses and/or approved other activities such as internships, independent study, or capstone experiences.

Electives:

- ANT 629 - Transformation of Eastern Europe 3 credit(s)
- ANT 673 - Peace and Conflict in the Balkans: Anthropological Perspectives 3 credit(s) or
- PAI 730 - Problems in Public Administration 1-3 credit(s)
- ANT 701 - Seminar on Multilateral Peacekeeping 3 credit(s) or
- PAI 701 - Seminar on Multilateral Peacekeeping 3 credit(s)
- FRE 600 - Selected Topics 1-6 credit(s) Contemporary France in Literature & Film *
Credits Towards the Certificate
In addition to these classes, students may also earn credits towards the Certificate in the following ways:

- Students can take a maximum of six-credit hours in any of the regional languages offered at the University at the 600 level. Turkish, Portuguese, and Polish are also considered regional languages in addition to those more generally considered when focusing on Europe.
- Students can take a maximum of three-credit hours for an internship experience in Europe or for the completion of a capstone course that focuses on a topic related to contemporary Europe or the EU (with the approval of the Director of the Certificate Program).

Health Services Management and Policy, CAS

Contact:
Thomas Dennison, Director
thdennis@maxwell.syr.edu

Major Requirements
The Certificate is a 12-credit program open to mid-career professionals who require a policy background to operate effectively in the dynamic health care sector. The certificate is earned after completion of two required graduate courses (6 credits) in health policy and two electives (6 credits) selected from approved courses offered by participating colleges and schools within the University in such areas as health and social policy, health law, demography, management, and economics. The culmination of the certificate is a capstone experience that may be a research paper or a supervised field experience that concludes with the development of a written paper.

This program is designed for two semesters of study and may be pursued independently of, or as part of, a master's or Ph.D. program. All courses may be applied to the EMPA or the EMIR degree. For those pursuing the certificate independently of another degree program, the capstone does not earn additional credit.

Two required courses:
- PAI 782 - Health Services Management 3 credit(s)
- PAI 783 - The Changing American Health Care System 3 credit(s)

Two approved elective courses:
Offered by participating schools and colleges within the University in such areas as health and social policy, health law, demography, management, and economics

Information, Technology, Policy and Management, CAS

Contact:
Stuart Thorson - thorson@syr.edu

Certificate Requirements
The 12-credit certificate of advanced study in Information, Technology, Policy and Management combines the resources of Maxwell and the University's School of Information Studies and College of Engineering and Computer Science. The certificate is designed to provide and enhanced integrated curriculum for graduate students seeking careers related to information technology.

The 12 credits must consist of one core course in each of the participating colleges (ECS, IST and MAX - 9 credits total) and one elective course from the student's home college (3 credits total). Student must be admitted to a department in at least one of the following colleges: ECS, IST, or MAX.

Latin American Studies, CAS
Program on Latin America and the Caribbean
346 Eggers Hall
315.443.4022

Certificate Requirements:
This certificate certifies successful completion of 12 credits of graduate courses from a variety of disciplines related to Latin American themes. For a course to be eligible for the PLACA Certificate, the PLACA director must agree that its Latin American content is at least 50% of the overall course content.

Interested students are encouraged to interact with the Director of the Certificate Program early in their tenure to develop a program of study. Once you are approved, you will need to fill out several forms such as the Graduate School’s Internal Admission Form to enroll in the program.

In order to receive the certificate, students must complete the 12-credit hours of coursework and earn a cumulative grade point average of at least 3.0 in these courses and successfully complete the degree program in their primary field.

The Program of Study must be completed and signed by your advisor and the director of PLACA.

Leadership of International and Non-Governmental
Organizations, CAS
Steve Lux, Director, Executive Education
(315) 443-3759
sjlux@maxwell.syr.edu

Certificate Requirements
The Certificate of Advanced Study in Leadership of International and Non-Governmental Organizations is a 12-credit program open to mid-career professionals who have an interest in the variety of leadership issues facing international and non-governmental organizations (NGOs). It requires completion of a cluster of four graduate courses organized by three thematic areas:

- the operating context and key actors
- managerial skills and competencies
- policy context and analysis.

There is one required public administration course, PAI 895- Executive Education Seminar Managerial Leadership. With careful guidance, students select the remaining three courses from the professional programs in public administration and international relations as well as the social science departments in the Maxwell School. To complete the certificate, students take at least one course in each thematic area, based on professional need or substantive interest. Students must seek approval from the faculty advisor about the proposed courses for the certificate prior to enrollment. This program may be pursued independent of, or as part of, a master’s or Ph.D. program. All courses may be applied to EMPA and EMIR degrees.

Middle Eastern Affairs, CAS

Program Director:
Yüksel Sezgin
100 Eggers Hall
315-443-4431
mes@maxwell.syr.edu

Faculty
Lamis Abdelaaty, Ahmed E. Abdel-Meguid, Carol Babiracki, Hossein Bashirinezhad, Mehrzad Boroujerdi, Zachary J. Braitman, 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 Komnitt, Dana M. Olwan, Kara Richardson, Robert A. Rubinstein, Osama “Sam” Salem, Yüksel Sezgin, Nazanin Shahrkani, James W. Watts

The Certificate of Advanced Studies in Middle Eastern Affairs is available to Syracuse University students in all graduate programs who are looking to supplement their degree with a strong foundation in the region’s culture and politics or to prepare for a career involving regional specialization. Students are required to complete at least twelve credits: a single three-credit required course and nine credits in the form of approved electives chosen from affiliated departments within the University and/or approved extracurricular experience.

Obtaining the Certificate
Students interested in obtaining the Certificate of Advanced Studies in Middle Eastern Affairs should consult the list of required and elective courses and other credit-bearing activities. Application for the Certificate should be made by first consulting with the student’s Faculty Advisor who will determine whether the student can pursue the Certificate consistent with the requirements of his/her degree program, and then by speaking with the Director of the Certificate Program, Professor Yüksel Sezgin.

Administrative Steps
Two forms must be filled out and delivered to the Middle Eastern Studies Program to complete this application stage:

- Students who have completed at least six credits of related coursework in Middle Eastern Studies should complete the Graduate Enrollment Internal Admission Application form to receive admission to the program. Once completed, the form should be submitted to Ms. Amy Marsden at the Moynihan Institute (346 Eggers Hall) who will sign for the Middle Eastern Studies Program and pass it on to the Graduate Admissions office (621 Skytop Road). Please note that the “Program Code” for the certificate in Middle Eastern Affairs is M17CAS.

The Program of Study form has to be signed by the student’s advisor and by Professor Yüksel Sezgin (100 Eggers Hall) who is the Director of the Middle Eastern Studies Program. The Program of Study will be held by Ms. Amy Marsden until all the requirements for the certificate (twelve credits) are complete. Ms. Marsden will submit this form to the Graduate Certification Office (107 Steele Hall) in a timely manner before the student’s expected graduation date so that the documents and information can be gathered as the graduation date approaches.

Please also remember that a Graduate Diploma Request Form must be completed through MySlice during the semester the student will graduate. Students must complete a separate form for each of their degree programs as each results in its own degree and diploma.

The Director will recommend granting the Certificate to students who have met all of the requirements (while maintaining a cumulative GPA of at least 3.0 for all classes taken toward it) and who are in good standing in their graduate school department.

Program Requirements
Twelve credits in four courses must be earned to be eligible for the certificate. These must include:

1. The choice of one of the program’s two foundational graduate-level courses (substitutions may be made in some cases with permission from the Director):
   - MES 682 - Social Theory and Middle East Politics 3 credit(s)
   - MES 644 - Israel and Palestine: Historical Approaches 3 credit(s)

2. Nine Total Elective Credits
Nine total elective credits chosen from the list of affiliated classes, the University’s language offerings, experiential education, and study abroad. The following classes have already been approved by the program:
   - MES 668 - Middle East in Anthropological Perspective 3 credit(s)
   - MES 707 - Culture in World Affairs 3 credit(s)
   - ARC 735 - Islamic Architecture 3 credit(s)
   - MES 644 - Israel and Palestine: Historical Approaches 3 credit(s)
   - MES 682 - Social Theory and Middle East Politics 3 credit(s)
   - MES 684 - International Relations of the Middle East 3 credit(s)
   - REL 628 - Muslim Rituals, Practices, and Performances 3 credit(s)
   - REL 676 - Religion and Jewish Literature 3 credit(s)
   - REL 607 - Ancient Religious Rhetoric 3 credit(s)
   - REL 625 - Pluralism in Islam 3 credit(s)

Credits Towards the Certificate
In addition to these affiliated classes, students may also earn credits towards the Certificate in the following ways:

- A maximum of six credits of any regional language courses at the 600 level (i.e., 620).
- Extracurricular experience (i.e., internships) that may count for between one and three credits (with the approval of the Program Director).
- A maximum of six credits of graduate-level Middle East-related independent study or special topics courses.
- A maximum of six credits of relevant, departmentally-approved coursework taken at another university. The Middle Eastern Studies Program, the Maxwell School and Syracuse University presently have established student exchange relationships with the American University in Cairo (Egypt).
- Bahçeşehir University (Turkey), Bogacizi University (Istanbul, Turkey), An Najah University (Nablus, Palestine), and the Interdisciplinary...
Center (Herzliya, Israel).

Prerequisite:
In order to enroll in the Certificate program, you must be a matriculated Syracuse University graduate student in good standing and have completed at least six credits of coursework in related classes.

Extracurricular Opportunities:
• Internships: Graduate students can receive a maximum of three credits for an internship in any governmental/non-governmental organization based either in the region or outside which deals strongly with the Middle East.
• Fieldwork: The Moynihan Institute of Global Affairs at the Maxwell School usually allocates one or two annual summer research grants for Maxwell doctoral students. The purpose of the award is to provide students the opportunity to gather data, undergo language training, and increase competitiveness of future proposals for funding. Grant amounts range from $1,000 to $3,000 and will be assigned on merit. Grant awardees register and receive credit for an independent study course (typically three credits). Students who have secured outside sources of funding may also submit proposals for fieldwork through independent study.
• Other Awards: MESP Young Scholar Prize is awarded annually to the best essay by a graduate student at the University dealing with any aspect of the Middle East. The author of the winning paper is presented with a certificate and a $500 prize.

Postconflict Reconstruction, CAS
Director, William C. Banks, 402 McNaughton Hall, 315-443-2284

Questions about the Program can be directed to Keli Perrin (kaperrin@law.syr.edu) or by calling INSCt at 315.443.2284.

http://insct.syr.edu/our-work/academicprograms/

The Certificate of Advanced Study in Postconflict Reconstruction (CAS) is a 12-credit, multidisciplinary program for law and graduate students preparing for careers in PCR, peace building, humanitarian relief, and international development.

The certificate provides students a documented concentration and familiarization with the various dimensions and goals of postconflict work, the types of actors who conduct it, the trade-offs and dilemmas they face, and the lessons learned from its application across various settings. Students learn the tools required for success in public service careers in reconstruction, human security, and development, including:
• Analytical techniques tailored for work in international development communities.
• A better understanding of how the US and the international community can effectively participate to rebuild shattered societies.
• New ways of thinking about the nature of conflict, cooperation, and security.

Specific topics of study include international law and the rule of law, human rights and human security, peace and conflict studies, diplomacy and international relations, humanitarian relief, economics of development, and capacity-building. This sequence of specialized coursework is coordinated across the Maxwell School, College of Law, Whitman School, and Newhouse School. All students take a core course-Fundamentals of Postconflict Reconstruction-and complete a Capstone Project/internship related to PCR.

Questions about the Program can be directed to Keli Perrin (kaperrin@law.syr.edu) or by calling INSCt at 315.443.2284.

Certificate Requirements
1) Required Core Course (Mandatory/three credits):
• PAI 719 - Fundamentals of Post-Conflict Reconstruction 3 credit(s)

2) Secondary Core Course (Choose one/three credits):
• Civil Wars & State-Building (PAI 730 )
• Economics of Development (ECN 651/PAI 757 )
• Rule of Law in Postconflict Reconstruction (LAW 813 )
• Fundamentals of Conflict Studies (PAI 601 / SOC601)
• Humanitarian Action: Challenges, Responses, Results (PAI 765 )
• Multilateral Peacekeeping (ANT/PAI 701 )

4) PCR Capstone Project/Internship:
• PAI 996 - Master's Project Paper 3 credit(s)
• EMPA/EMIR Masters Project
• PAI 670 - Experience Credit 1-6 credit(s) or
• PAI 690 - Experience Credit
• LAW 991 - Experience Credit or
• LAW 997 - Experience Credit
• PAI 670 - Experience Credit 1-6 credit(s) Global Internship IR Students or
• PAI 711 - Practicum in International Organizations 6 credit(s) Global Internship IR Students or
• PAI 715 - Topics in Global Development 3 credit(s) Global Internship IR Students or
• PAI 752 - MPA Workshop 3 credit(s)
• PAI 700 - Selected Topics 1-6 credit(s)
• Washington Practicum

Public Administration, CAS
Contact:
Margaret Lane, Asst. Director, Executive Education 315-443-8708

Certificate Requirements
The certificate of advanced study (CAS) in Public Administration is a 12-credit certificate, and is for midcareer professionals who cannot leave work to complete the entire EMPA but still desire a rigorous educational experience focusing on significant elements of public administration. The certificate can be completed in two ways: as a full-time student for one semester (roughly 15 weeks), or on a part-time basis completing the course work in 1-3 years.

To complete the certificate, students are required to complete 12-credits of course work from Public Administration course offerings (recognized by a PAI prefix), including one required course, PAI 895 - Executive Education Seminar: Managerial Leadership. Most individuals taking the certificate state an interest in improving their management and leadership skills or an interest in developing concrete knowledge in a specific policy area. This certificate can be concurrently pursued with the EMIR degree.

Public Health, CAS
Contact:
Michael Wasylenko, PhD.
Senior Associate Dean, Maxwell School of Citizenship and Public Affairs

The CASPH is a 5 course (15-credit hour) program of study. The Certificate Program is organized to offer a continuous integrated core curriculum centered around the public health competencies. The curriculum has been designed to reflect the interrelationship between public health practice and research and designed to train current and future practitioners and researchers in the core public health functions. The abbreviated training allows interested students, who are either unable to complete a master degree, yet interested in augmenting on-the-job training or supplementing an advanced degree with core public health principles and practices, the opportunity to acquire the necessary training to manage public health problems.

All five (5) of the required courses are existing core Master of Public Health (MPH) courses required for degree seeking students.

Curriculum/Structure
The certificate is designed for part-time study to accommodate the working professional. The certificate can be completed within a three semester (Fall, Spring, Summer) block with admission during the fall semester. All requirements for the certificate program must be completed.
infrastructure. In this context, public infrastructure and social sustainability concerns of our public competency for functional, financial, environmental knowledge that will assure awareness and infrastructure. Students will develop skills and public policy considerations, of public security, capital and operating budgets, in both ECS and Maxwell that addresses the certificate program is geared towards mid-career professionals who are interested in building on experience and expanding their skills and knowledge in infrastructure planning, engineering, management and administration through course work that is relevant to their knowledge, interests, and needs. The CAS-PIML will deliver a certificate to students in both ECS and Maxwell that addresses the planning, design, construction, maintenance, security, capital and operating budgets, environmental and social sustainability impacts and public policy considerations, of public infrastructure. Students will develop skills and knowledge that will assure awareness and competency for functional, financial, environmental and social sustainability concerns of our public infrastructure. In this context, public infrastructure is broadly defined as physical service systems, i.e. water, storm water and waste water systems, transportation, electrical power distribution and telecommunications. The certificate program will be enhanced by on-going speaker programs, executive workshops, and seminars. It will be open to students in both colleges. Applications from students seeking only this certificate will also be considered. The application process will be administered by the Executive Education Program of the Maxwell School.

Certificate Requirement
The CAS-PIML will allow mid-career students interested in Public Infrastructure Management an opportunity to complete a 15-credit program, capitalizing on the numerous strengths within ECS, combined with the PAIA and Executive Education programs within the Maxwell School of Citizenship and Public Affairs. In the program, they will combine multi-disciplinary academic coursework with the real-world strategy and problem-solving skills necessary for today's leaders in complex public administration and utility environments. The degree program will integrate core courses with a career-track elective to provide a solid, yet dynamic and pertinent foundation for advanced studies in the technical and practical challenges of the development and oversight of public infrastructure - including water and wastewater systems, transportation, communications and power.

Core Courses (12 credits)
- PAI 895 - Mid-career Training Group 1-3 credit(s) Executive Education Seminar: Managerial Leadership
- PAI 734 - Public Budgeting 3 credit(s) or
- PAI 731 - Financial Management in State and Local Governments 3 credit(s)
- MAE 548 - Engineering Economics and Technology Valuation 3 credit(s)
- ECS 636 - Sustainable Development and Infrastructure Management 3 credit(s)

Career Elective (3 credits):
One course selected from the list below, or approved by the program director
- CIE 570 - Water and Wastewater Treatment Plant Design 3 credit(s)
- CIE 601 - Construction Engineering and Project Management 3 credit(s)
- CIE 643 - Transportation Engineering 3 credit(s)
- CIE 678 - Rehabilitation of Civil Infrastructure 3 credit(s)
- PAI 601 - Fundamentals of Conflict Studies 3 credit(s)
- PAI 730 - Problems in Public Administration 1-3 credit(s) Managing Individual, Group, and Systemic Conflicts
- PAI 730 Environmental Conflicts and

Public Infrastructure Management and Leadership, CAS
Margaret Lane Assistant Director, Executive Education
219 Maxwell Hall
315-443-8708
melane02@maxwell.syr.edu
Dr. Ossama “Sam” Salem
Department Chair of Civil and Environmental Engineering
Yabroudi Chair Professor of Sustainable Civil Infrastructures
151 Link Hall, 315-443-2311
omsalem@syr.edu

Program Description
The College of Engineering and Computer Science (ECS), in collaboration with the Department of Public Administration and International Affairs (PAIA) and the Executive Education Program (Exec Ed) within the Maxwell School (Maxwell) at Syracuse University have created a joint 15-credit certificate program entitled the Joint Certificate of Advanced Study in Public Infrastructure Management and Leadership (CAS-PIML). This certificate program is geared towards mid-career professionals who are interested in building on their body of experience and expanding their skills and knowledge in infrastructure planning, engineering, management and administration through course work that is relevant to their knowledge, interests, and needs.

The CAS-PIML will deliver a certificate to students in both ECS and Maxwell that addresses the planning, design, construction, maintenance, security, capital and operating budgets, environmental and social sustainability impacts and public policy considerations, of public infrastructure. Students will develop skills and knowledge that will assure awareness and competency for functional, financial, environmental and social sustainability concerns of our public infrastructure. In this context, public infrastructure
Public Education 3 credit(s)
- EDA 782 - Issues and Practices in District Leadership 3 credit(s) (CAS)
- EDA 792 - Legal Basis of Education 3 credit(s) (CAS)
- IDE 641 - Techniques in Educational Evaluation 3 credit(s)
- PAI 709 - Research Consultancy in Public Diplomacy 3 credit(s) (MPA)
- PAI 722 - Quantitative Analysis 3 credit(s) (MPA)
- PAI 723 - Economics for Public Decisions 3 credit(s) (MPA)
- PAI 731 - Financial Management in State and Local Governments 3 credit(s) (MPA)
- PAI 734 - Public Budgeting 3 credit(s)
- PAI 735 - State and Local Government Finance 3 credit(s) (MPA)
- EDA 899 - Internship in Educational Administration and Supervision 3-4 credit(s) (This internship seminar is completed at the end of the program)

Certificate Requirements
A required practicum experience (a 600-hour clinical internship, typically spread over spring, summer and early fall semesters) completes the course structure of the program.

To receive certification as a school district business leader a student must have 60 graduate credits and a Master's degree. The SDBL program itself consists of courses (including the internship) accounting for 37 of these graduate credits. The number of courses that a student is required to take varies depending on her/his previous graduate experience. Candidates who have either completed or are concurrently pursuing a Certificate of Advanced Study in Educational Leadership or a Master's of Public Administration are likely to have already completed some courses required under the SDBL program. Each student will take at least thirteen (13) graduate credits toward the SDBL that are not included in some other program. Certification and (under most circumstances) program completion also require that the candidate pass a New York State administered examination in School District Business Leadership.

The following courses are required by the program. (We have marked below those that are either required or elective courses in our CAS program in educational leadership for school district and school building leaders (CAS) or our MPA program in public administration (MPA), which candidates may already have taken or may be taking simultaneously to secure those degrees.):

- EDA 752 - Leadership for Organizational and Institutional Development 3 credit(s) (CAS)
- EDA 762 - Leadership for Inclusive Schooling 3 credit(s) (CAS)
- EDA 735 - Human Resource Management in...
• ANT 625 - Problems in Anthropology of South Asia 3 credit(s)
• ANT 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
• SAS 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
• PAI 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s)
• HIN 620 - Language Training in Preparation for Research Using Hindi 3 credit(s)
• HST 775 - Readings and Research in South Asian History 3 credit(s)
• REL 687 - Global Hinduism 3 credit(s)

Candidates can choose three other courses from the list below:
• ANT 621 - Gender & Sexuality in South Asia 3 credit(s) or
• SAS 621 - Language Training in Preparation for Research Using Hindi 3 credit(s)
• ANT 625 - Problems in Anthropology of South Asia 3 credit(s)
• ANT 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
• SAS 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s) or
• PAI 626 - Cultures and Politics of Afghanistan and Pakistan 3 credit(s)
• ANT 628 - Muslim Rituals, Practices, and Performances 3 credit(s) * or
• REL 628 - Muslim Rituals, Practices, and Performances 3 credit(s) *
• ANT 756 - Development Anthropology 3 credit(s) *
• ANT 764 - Gender and Globalization 3 credit(s) * or
• GEO 764 - Gender and Globalization 3 credit(s) * or
• WGS 764 - Gender and Globalization 3 credit(s) *
• HIN 620 - Language Training in Preparation for Research Using Hindi 3 credit(s)
• HST 715 - Readings and Research in American History 3 credit(s)
• HST 775 - Readings and Research in South Asian History 3 credit(s)
• LIN 671 - Dimensions of Bilingualism and Multiculturalism 3 credit(s) *
• LIN 681 - Global Communication Through World Englishes 3 credit(s) *
• PAI 707 - Culture in World Affairs 3 credit(s) *
• PAI 715 - Topics in Global Development 3 credit(s) *
• PAI 758 - Public Finance in Developing Areas 3 credit(s) *
• REL 621 - Teaching World Religions in Theory and Practice 3 credit(s) *
• REL 625 - Pluralism in Islam 3 credit(s) *
• REL 626 - Beyond the Veil: Gender Politics in Islam 3 credit(s) * or
• SAS 626 - Cultures and Politics of Afghanistan and Pakistan Muslim Women Beyond the Veil *
• REL 627 - Globalization and Religion: Processes and problems 3 credit(s) *
• REL 687 - Global Hinduism 3 credit(s)
• REL 692 - Other People's Religions 3 credit(s) *
• REL 696 - Gender and Religion: Theory and Practice 3 credit(s) *
• REL 699 - Writing Religions and Cultures: Ethnographic Practice 3 credit(s) *

Note:
*Some South Asian content is included (30% or more). Students may use these courses for the certificate only if they write their research paper on a South Asian topic.
Maxwell School of Citizenship and Public Affairs Faculty

Lamis Abdelaty, 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

Edwin Ackerman, Assistant Professor, Sociology
Ph.D., University of California at Berkeley, 2016
Political Sociology, Comparative-Historical Sociology, Latin-American Studies, Social Theory

Alan Alport, Associate 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, Maxwell Professor Emerita 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, ethnography, Caribbean, North America

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; Maxwell Professor of Teaching Excellence, Anthropology
Ph.D., University of California, Los Angeles, 1983
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)

William P Tolley Distinguished Professor in the Humanities
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-Secretary-General for Management at the United Nations; Former Executive Director, World Food Program

Robert Bifulco, Associate Dean and Chair, and 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; O’Hanley Faculty Scholar
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, Professor Emeritus, 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 Emeritus, 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

Julia Carboni, Assistant Professor, Public Administration and International Affairs
Ph.D., University of Arizona, 2012
Public and non-profit management, collaborative governance

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
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
Gavan Duffy, Associate Professor, Political Science
Ph.D., Massachusetts Institute of Technology, 1987
Political methodology, political behavior and communication, American politics
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, 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 and Chair, Melvin A. Eggers Faculty Scholar, Faculty Associate, Aging Studies Institute, Economics
Ph.D., University of Wisconsin, Madison, 2004
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
Alfonso Flores-Lagunes, Professor, Melvin A. Eggers Faculty Scholar, Economics
Ph.D., The Ohio State University, 2001
Labor economics, applied and theoretical econometrics
Michael A. Flusche, Associate Professor Emeritus, History
Ph.D., Johns Hopkins University, 1973
American Civil War and Reconstruction, American South
Shana Gadarian, Associate 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 Hamersma, 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 Daphne 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, Distinguished Professor, Economics
Ph.D., Michigan State University, 1996
Theoretical and applied econometrics, spatial econometrics

Yiin Hou, Professor, Public Administration & International Affairs
Ph.D. Syracuse University, 2002
Public budgeting and finance

Peter Howe, Assistant Professor, Economics
Ph.D., Syracuse University, 2004
Urban economics, public 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, Associate 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

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, Professor and Michael O. Sawyer Chair in Constitutional Law and Politics
Ph.D., Rutgers University, 1999
Supreme Court, American constitutional development

Jerry S. Kelly, Distinguished Professor Emeritus, 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., Auckland 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. LeCuyer, 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 and applied econometrics

Chung-Chi (Eugene) Liu, Assistant Professor, Economics
Ph.D. University of Toronto, 2016
International economics, industrial organization, organizational economics, network economics

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; Tenth Decade Faculty Scholar
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, 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 F. 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)
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
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, Chappell 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
Katherine Michelmore, Assistant Professor, Public Administration and International Affairs
Ph.D., Cornell University, 2014
Family demography, labor economics, public finance, economics of education
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
Devavash Mitra, Professor; Gerald B. and Daphna Cramer Professor of Global Economics, 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 Urbana-Champaign, 1987
Transnational feminist theory, postcolonial feminism, globalization and anti-capitalist praxis, the politics of knowledge, and anti-racist education
Mark Monmonier, Distinguished Professor, Geography
Ph.D., Pennsylvania State University, 1969
Geographic information (technology, policy, and societal role), history of cartography in the 20th century (esp. innovation and intellectual property), map design, environmental mapping
Jennifer Karas 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
Tessa Murphy, Assistant Professor, History
Ph.D., University of Chicago, 2016
Early American History
Robert Murrett, Professor of Practice, Public Administration & International Affairs
M.A., Georgetown University and M.A., Defense Intelligence College
Intelligence, national security, military strategy
Piyousha Muteja, Assistant Professor, Economics
Ph.D., University of Iowa, 2010
International economics, economic development, macroeconomics
Tina Nabatchi, Associate Professor, Public Administration & International Affairs; Tenth Decade Faculty Scholar
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 Ivor Onondich, 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
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 Ratcliffe, 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 Public Affairs 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, Delpin Professor of Latin American Geography, Geography
Ph.D., London University, 1967
Latin America, historical geography, Spanish colonialism, development

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

Michah Rothbart, Assistant Professor, Public Administration and International Affairs
Ph.D., New York University, 2016
Non-profit and public financial management, public budgeting, education policy

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. Sangmopam, Professor, African American Studies and Political Science
Ph.D., University of Chicago, 1984
Comparative politics, Pan Africanism, 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 Sennett, Professor Emeritus, History and African American Studies
Ph.D., University of Delaware, 1972
African American religious history, slavery and abolition

Yuksel Sorgun, Assistant Professor
Ph.D., University of Washington, 2007
Comparative politics, law and courts, the middle east, religion, human rights

Nazanin Shahrokni, Assistant Professor, Sociology
Ph.D., University of California at Berkeley, 2013
Political Sociology, Urban Studies, Middle East Studies, Gender

Martin S. Shanguhyia, Associate Professor, History
Ph.D., West Virginia University, 2007
Colonial and postcolonial 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

Merrill Silverstein, Marjorie Cantor Professor of Aging Studies, Sociology
Ph.D., Columbia University, 1990
Intergenerational relations, social support, caregiving policy, migration in later life, and international views on aging families

Perry Singleton, Associate 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, 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

Jennifer Stromer-Galley, Professor, Information Studies and Political Science (by courtesy)
Ph.D., University of Pennsylvania, 2002
Digital politics, e-government, online deliberation, influence and leadership in social media, decision-making and behavior in games

Farhana Sultana, Associate Professor, Geography
Ph.D., University of Minnesota, 2007
Political ecology, environment and development, water governance, climate change, gender, South Asia

Jennifer Stromer-Galley, Professor, Information Studies and Political Science (by courtesy)
Ph.D., University of Pennsylvania, 2002
Digital politics, e-government, online deliberation, influence and leadership in social media, decision-making and behavior in games

David Van Slyke, Dean 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 Wasylchenko, 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, Laura J. and L. Douglas Professor of Teaching Excellence, 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 history, historical geography, animals and society, environmentalism

Jamie L. Winders, Professor and Chair, Geography
Ph.D., University of Kentucky, 2004
Urban, cultural and social geography, race/ethnicity, gender, international migration, North America, qualitative and historical research methods, new media, social reproduction

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

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 Emeritus; International Relations and Political Science
Ph.D., University of Minnesota, 1972
International relations, political theory and methodology

Áron Dávid Tóbiás, Assistant Professor, Economics
Ph.D., Yale University, 2016
Microeconomic theory, public finance, political economy

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, globalization, global health, reproductive health, gender & sexuality; nationalism, South Asia
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit(s)</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 500</td>
<td>Selected Topics</td>
<td>1-6</td>
<td>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.</td>
</tr>
<tr>
<td>ANT 500</td>
<td>History of Anthropological Theory</td>
<td>3</td>
<td>At least 1x fall or spring. Main theoretical approaches to the study of the origin and development of society and culture: cultural evolutionists, functionalists, diffusionists, structuralists, and historicists.</td>
</tr>
<tr>
<td>ANT 500</td>
<td>Ethnology</td>
<td>3</td>
<td>Upon sufficient interest. Human societies in their many component parts: kinship, politics, social organization, religion, values, etc. Theoretical models most applicable to these differing topics. PREREQ: ANT 611</td>
</tr>
<tr>
<td>ANT 500</td>
<td>Political Anthropology</td>
<td>3</td>
<td>Irregularly. Double Numbered with: ANT 416. Social power in the global political economy. Co-existence 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.</td>
</tr>
<tr>
<td>ANT 617</td>
<td>Economic Anthropology</td>
<td>3</td>
<td>Irregularly. Contribution of anthropology to economic theory and the relevance of orthodox economics to cross-cultural and evolutionary studies of society.</td>
</tr>
<tr>
<td>ANT 619</td>
<td>Ritual Theory and Religious Practice</td>
<td>3</td>
<td>Irregularly. Crosslisted with: REL 619. Survey and evaluation of major ritual theories, tested against a particular set of religious and cultural practices, such as those involving purification and pollutions, or holidays and festivals.</td>
</tr>
<tr>
<td>ANT 620</td>
<td>Readings, Research and Ethnography</td>
<td>3</td>
<td>Every semester. Individual or group readings and research on topics in ethnography. Student or group works with a faculty member and submits reports as individually arranged. Repeatable.</td>
</tr>
<tr>
<td>ANT 621</td>
<td>Gender &amp; Sexuality in South Asia</td>
<td>3</td>
<td>Odd academic yr e.g. 2007-8. Crosslisted with: SAS 622. Double Numbered with: ANT 421. 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/&quot;third sex&quot; identities. Additional work required of graduate students.</td>
</tr>
<tr>
<td>ANT 623</td>
<td>Effects of Globalization in Latin America</td>
<td>3</td>
<td>Odd academic yr e.g. 2007-8. Crosslisted with: LAS 623. Double Numbered with: ANT 423. A grassroots view of major transformations in Latin America due to globalization/global change, including adaptations to global warming, effects of and reactions to neo-liberal policies, internal and international migration, ethnic movements and social revolutions.</td>
</tr>
<tr>
<td>ANT 624</td>
<td>Negotiation: Theory and Practice</td>
<td>3</td>
<td>At least 1x fall or spring. Double Numbered with: ANT 424. 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.</td>
</tr>
<tr>
<td>ANT 625</td>
<td>Problems in Anthropology of South Asia</td>
<td>3</td>
<td>Irregularly. One topic of theoretical concern to anthropologists dealing with South Asia, e.g., caste, kinship, village Hinduism, economics, urbanization, rural/urban networks.</td>
</tr>
<tr>
<td>ANT 626</td>
<td>Cultures and Politics of Afghanistan and Pakistan</td>
<td>3</td>
<td>Even Academic Yr e.g. 2004-5. Crosslisted with: PAI 626, SAS 626. Double Numbered with: ANT 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.</td>
</tr>
<tr>
<td>ANT 627</td>
<td>Brazil: Anthropological Perspectives</td>
<td>3</td>
<td>Irregularly. Double Numbered with: ANT 427. 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.</td>
</tr>
</tbody>
</table>
Crosslisted with: EAR 607
Origins

ANT 639 - Climate Change and Human Origins
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Crosslisted 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. Additional work required of graduate students.

ANT 641 - Anthropological Archaeology
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Methodology and theory in prehistoric archaeology. Development of archaeological theory, design and execution of research. Application of archaeology to solving problems in culture change and development.

ANT 642 - Methods in Archaeology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 442
Formulation and conduct of archaeological research with a focus on field and laboratory methods to obtain and analyze data. Survey techniques, excavation strategies, archaeological classification, and data base management. Additional work required of graduate students.

ANT 643 - Advanced Field Methods in Archaeology
Maxwell School of Citizenship and Public Affairs
6 credit(s) Only during the summer
Supervised training in excavating, organizing, coordinating, and directing research on an archaeological site. Repeatable

ANT 644 - Laboratory Analysis in Archaeology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 444
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.

ANT 645 - Public Policy and Archaeology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Croslisted with: NAT 645
Double Numbered with: ANT 445
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 646 - Caribbean Archaeology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 446
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 649 - World Heritage Sites
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 449
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 651 - Classics in the Sociology of Religion and Morals
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Croslisted with: REL 651, SOC 651
Classical sociological writings of Emile Durkheim and Max Weber and their contemporary significance.

ANT 652 - Anthropology and Public Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 452
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 653 - Poverty, Policy, and Human Services
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 453
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 655 - Culture and AIDS
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: WGS 655
Double Numbered with: ANT 455
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 656 - Representations of Indigenous Peoples in Popular Culture
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: NAT 656
Double Numbered with: ANT 456
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 657 - Race in Latin America and the Caribbean
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Theoretical approaches to race; history of racial ideologies; how racial ideologies influence self-concepts and life chances; interactions of racial ideologies with expressive culture and religion; antiracism movements; state efforts to dismantle racial inequality; race and transnational migration.

ANT 659 - Contemporary Native North American Issues
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: NAT 659
Double Numbered with: ANT 459
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 661 - Museums and Native Americans
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: NAT 661
Double Numbered with: ANT 461
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 662 - Culture and Reproductive Health and Medicine
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: HTW 662
Double Numbered with: ANT 462
Cultural anthropological approaches to cross-cultural 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 663 - Global Health
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: HTW 663
Double Numbered with: ANT 463
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 665 - Critical Issues in Medical Anthropology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 465
Illness and healing in ecological and cross-cultural 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 666 - Culture and Sexual Behavior
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 466
Cross-cultural patterns of dating and courtship, sexuality, marriage, fertility, and divorce from biosocial and medical perspectives. Additional work required of graduate students.

ANT 667 - Culture and Mental Disorders
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 467
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 668 - Middle East in Anthropological Perspective
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: MES 668, PAI 668
Double Numbered with: ANT 468
Anthropology of the social, cultural, geographical, and political realities of the Middle East. Additional work required of graduate students.

ANT 669 - Medical Anthropology in Ecological Perspective
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 469
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 670 - Experience Credit
Maxwell School of Citizenship and Public Affairs
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. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

ANT 672 - Language, Culture, and Society
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: LIN 672, WGS 672
Double Numbered with: ANT 472
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 673 - Peace and Conflict in the Balkans: Anthropological Perspectives
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 473
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 675 - Culture and Disputing
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 475
Explores modalities of disputing, dispute resolution, and conflict management in cross-cultural 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 676 - Women, War and Peace
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: ANT 476
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 677 - Culture and Conflict
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 477
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 679 - Anthropology of Global Transformations
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 479
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 681 - Ethnographic Techniques
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: ANT 481
Research methods and techniques in cultural anthropology. Participant observation, interviewing, establishing rapport, research design, recording and analyzing field data, etc.

ANT 682 - Life Histories/Narratives
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 482
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 683 - Social Movement Theory
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 483
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 684 - Social Movement Research Methods
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: ANT 484
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 686 - Comparative Cultural Analysis: Africa
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Africa through social anthropology complemented by history. Discuss diverse societies to illustrate principles and features of societal life and organization. The major cultural focus is on West Africa, traditional society, colonial legacy, and change.

ANT 689 - Memory, Culture, Religion
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: REL 689
Collective memory and constructions of the past as cultural phenomena; the roles religious identities, values, and institutions play as individuals, communities, and nations recollect particular moments, eras, crises, and localities.

ANT 690 - Independent Study
Maxwell School of Citizenship and Public Affairs
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 691 - Critical Issues in the Study of Native Americans
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: REL 642
Methodological issues related to studies of indigenous traditions and develops interpretive strategies for using literature about Native American religions.

ANT 694 - Underground Railroad
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Crosslisted with: AAS 634, HST 634
Double Numbered with: ANT 494
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 699 - Writing Religions and Cultures: Ethnographic Practice
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: REL 699
A range of aims and strategies for writing ethnographies of religion in the multiple contexts of culture, history, and politics.

ANT 700 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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 701 - Seminar on Multilateral Peacekeeping
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: PAI 701
One-week intensive course in New York City between fall and spring semesters with follow-up sessions in Syracuse. Combination of peacekeeping theory, analysis, and practice of operations. Speakers from United Nations, nongovernmental organizations, and U.S. government.

ANT 707 - Culture in World Affairs
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: MES 707, PAI 707
A systematic survey of the ways in which local, organizational, and transnational issues in world
affairs are affected by culture.

**ANT 711 - Current Anthropological Theory**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring

**ANT 713 - Proposal Writing**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Only during the summer
Crosslisted with: CAS 713
A two-week workshop during which graduate students draft a proposal for dissertation or other research; includes extensive evaluation of ongoing drafts.

**ANT 741 - Archaeological Theory**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
In-depth examination of contemporary theory in archaeology and application to archaeological research. While focusing on processual approach, the course will examine critical, post-processual, structural, and symbolic archaeology.

**ANT 756 - Development Anthropology**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Provides students of public administration with an overview of the use of sociocultural analysis in international development policy, planning, project implementation, impact analysis, monitoring, and evaluation. Political and ethical issues regarding development professionalism.

**ANT 764 - Gender and Globalization**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: GEO 764, WGS 764
The impact of the increasing hypermobility of capital and culture flows across borders on gender relations.

**ANT 800 - Selected Topics**
Maxwell School of Citizenship and Public Affairs
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 970 - Experience Credit**
Maxwell School of Citizenship and Public Affairs
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. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing. Repeatable

**ANT 990 - Independent Study**
Maxwell School of Citizenship and Public Affairs
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 997 - Masters Thesis**
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) Every semester
Repeatable

**ANT 999 - Dissertation**
Maxwell School of Citizenship and Public Affairs
1-15 credit(s) Every semester
Repeatable

**Economics**

**ECN 505 - Mathematical Economics**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Introduction to use of basic mathematical techniques in economic analysis. PREREQ: ECN 613

**ECN 610 - Special Topics in Economics**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Various special topics of economics issues offered as available. PREREQ: ECN 601 Repeatable 5 time(s), 18 credits maximum

**ECN 611 - Microeconomics I**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Consumer and firm theory. Emphasis on the development of analytic techniques and the ability to apply them to economic models. PREREQ: ECN 301, ECN 302, ECN 602

**ECN 612 - Microeconomics II**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
General equilibrium theory and advanced topics in economic theory. PREREQ: ECN 611

**ECN 613 - Macroeconomics I**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Aggregate economic analysis. Emphasizes macroeconomic models and main currents in contemporary macroeconomic thought. PREREQ: ECN 613

**ECN 614 - Macroeconomics II**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Advanced topics and recent developments in macroeconomics. Inflation theory, monetary theory, open economies, rational expectations, and current controversies. PREREQ: ECN 613

**ECN 615 - History of Economic Thought**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Economic theories from antiquity to the 20th
century.

ECN 620 - Foundations of Econometrics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Only during the summer  
Probability and statistics. Random variables, joint probability distributions, point estimation, and hypothesis testing procedures. May not be repeated for credit. Open to economics Ph.D. and Applied Statistics masters students only. Two semesters of calculus required.

ECN 621 - Econometrics I  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Mathematical formulation of economic models. Statistical problems of estimating parameters in regression analysis.  
PREREQ: ECON 605 AND ECON 620

ECN 622 - Econometrics II  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Estimation problems and techniques in more complex economic models.  
PREREQ: ECON 621

ECN 631 - Public Finance  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Economics of expenditure and taxation decisions of U.S. federal government. Public choice, economics of transfer payments to individuals, personal and corporate income taxation, and economics of social security program. For Master's candidates.

ECN 635 - State and Local Government Finance  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Expenditures and revenues of state and local governments. Fiscal aspects of intergovernmental relations.  
PREREQ: ECON 601

ECN 655 - Economics of Health and Medical Care  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Economic theory, empirical evidence, and public policy concerning health and medical care in the U.S. Primary objective to analyze health care problems from an economic perspective. Prereq (for ECN 655): ECON 601 or equivalent; (for PAI 736): PAI 723.

ECN 661 - Economics of Development  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Crosslisted with: PAI 757  
Economic development in international settings. Labor and employment, population, education, health and nutrition. Why some countries have rapid economic development, and others low growth and pervasive poverty.  
PREREQ: PAI 723

ECN 662 - Public Finance in Developing Areas  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Public finance in less-developed countries. Urban taxation and provision of public services. Considering efficiency and equity issues.  
PREREQ: PAI 723

ECN 665 - International Economics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Balance of payments, foreign exchange markets, international trade theory, tariffs, quotas, adjustment mechanisms, and exchange controls.

ECN 681 - Money, Banking & Monetary Policy  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Only during the summer  
PREREQ: ECON 602

ECN 720 - Topics in Econometrics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Selected topics in applied and advanced econometrics.  
PREREQ: ECON 622  
Repeatable 3 time(s), 12 credits maximum

ECN 731 - Public Expenditures  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Theory of public goods; incidence of expenditures; intergovernmental relations; expenditure determinants, benefit-cost analysis.  
PREREQ: PAI 723 OR ECON 601  

ECN 732 - Taxation  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Tax structures at federal, state, and local levels. Incidence and effects of property, income, and commodity taxation. Analysis of tax equity.

ECN 741 - Urban Economics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Urban land-use patterns, transportation, and housing. Theoretical and quantitative framework.

ECN 745 - Regional Economics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Even Academic Yr e.g. 2004-5  
Theory and analysis of regional economics; interregional income theory and factor movements, regional growth, accounts, and policy.

ECN 751 - Labor Economics I  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Theory and evidence. Static and dynamic models of labor supply and demand, human capital, wage determination, and effects of family background on labor market outcomes.

ECN 752 - Labor Economics II  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Income distribution, effects of health on work and wages, discrimination, retirement decisions, and impacts of government programs and policies.  
PREREQ: ECON 751

ECN 765 - Advanced International Trade  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Trade theory, derivation of models, theory of protection. Impact of technology, market structure, and taxation on pattern of trade.

ECN 776 - Economics of Science and Technology  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Interaction of technological change and policy. Introduction to the economic analysis of knowledge as a public good. Diffusion of knowledge and the role knowledge transfer plays in the industrialized world and in the economic growth of developing nations.  
PREREQ: PAI 723 OR ECON 601
ECN 777 - Economics of Environmental Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PAI 777
How economic incentives may lead to environmental problems and how government policy can maintain or improve environmental quality. Methods for valuing the benefits of environmental amenities and the effects of environmental policy on economic growth.
PREREQ: PAI 723 OR ECN 601

ECN 778 - Development Finance: Building Inclusive Financial Systems
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PAI 778
Focus on how to build the policy and institutional infrastructure for delivering financial services that serve the poor.

ECN 820 - Dissertation Workshop I
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
For dissertators at all stages, providing critical feedback for those who are advanced and guidance for those who are beginning. Coverage includes: establishing a topic (originality, importance, search); trade off and balance between theory and empirical research; oral and written presentation, packaging, persuasion.
Repeatable

ECN 821 - Dissertation Workshop II
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
This course is intended to give experience in writing and presenting papers as well as evaluation of classmates' papers. Third- and fourth-year graduate economics students.
Repeatable

ECN 865 - Topics International Economics
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Understanding of the intuition, theory, and methods underlying current research on trade and trade policy. Overall picture of research on international trade policy.
PREREQ: ECN 765 OR ECN 665

ECN 997 - Masters Thesis
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) Every semester
Repeatable

ECN 999 - Dissertation
Maxwell School of Citizenship and Public Affairs
1-15 credit(s) Every semester
Repeatable

Geography

GEO 500 - Topics in Geography
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) At least 1x fall or spring
In-depth studies of selected topics.
Repeatable

GEO 600 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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

GEO 602 - Research Design in Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Approaches to research, alternative philosophies, and research designs. Research procedures, information gathering. Collection of original data. Formulation of individual research topics.

GEO 603 - Development of Geographic Thought
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring

GEO 605 - Writing Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Workshop on academic writing for geographers. Students exposed to the techniques of scholarly writing and practices of creative nonfiction.

GEO 606 - Development and Sustainability
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Critical analysis of international development and sustainability. Focuses on the complex political, economic, cultural, and ecological processes involved in development discourse and practice. Readings and case studies drawn from Latin America, Africa, and Asia.

GEO 609 - Readings and Special Work in Advanced Geography
Maxwell School of Citizenship and Public Affairs
1-3 credit(s) Every semester
Topics to be selected in conference with advisor for individual program of study and research.

GEO 610 - Qualitative Methods in Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
This course provides an overview of qualitative methods in human geography. It examines the relationship between methodology, epistemology, and politics, compares different qualitative methods, and gives students hands-on experience with a range of methodological tools.

GEO 622 - Water: Environment, Society and Politics
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Double Numbered with: GEO 422
Critical geographical analyses of inter-connected and cross-scalar role of water in environment, society, politics and economy globally. Investigates various water-society relationships, water governance, policies, crises, struggles, controversies, conflicts, and water justice, in theory and practice. Additional work required of graduate students.

GEO 626 - Environmental Change in the Anthropocene
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: GEO 426
Investigation of the roots of the Anthropocene as a concept and a geologic epoch; examination of human drivers of and interactions with global environmental change. Additional work required of graduate students.
PREREQ: GEO 103 OR GEO 155 OR GEO 215

GEO 655 - Biogeography
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: GEO 455
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 670 - Experience Credit
Maxwell School of Citizenship and Public Affairs
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
GEO 672 - Geopolitics and the State
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Survey of political geographic research on states, nations, territories, and their connection with geopolitical theories and the practice of foreign policy; focus on critical approach to applied geopolitical thinking.

GEO 682 - Remote Sensing for Environmental Applications and Research
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Principles and environmental applications of remote sensing, emphasizing research. Uses and limitations of remotely-sensed data; typical image processing operations and analyses; laboratory exercises and individualized advanced work and term project.

GEO 683 - Geographic Information Systems
Maxwell School of Citizenship and Public Affairs
3-4 credit(s) Every semester
Double Numbered with: GEO 383
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 684 - GIS for Urban Environments
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Double Numbered with: GEO 484
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 683

GEO 685 - Community Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: GEO 485
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 686 - Quantitative Geographic Analysis
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Descriptive and inferential statistics for use geo-referenced data, spatial autocorrelation, and geostatistics. Geographic examples. Weekly labs. Individualized advanced work and term project.

GEO 687 - Environmental Geostatistics
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: CIE 687
Statistical analysis of spatial patterns in environmental data. Exploratory data analysis; estimation, modeling, and interpretation of variograms; prediction using driging. Applications in engineering, geography, earth science and ecology. Use of geostatistical software.

GEO 688 - Geographic Information and Society
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: GEO 388
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 689 - Practicum in Community Geography
Maxwell School of Citizenship and Public Affairs
1-3 credit(s) Every semester
Double Numbered with: GEO 489
Supervised 135 hour internship in community-based 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 705 - Theories of Development
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: SOS 705
Review of theories of development, economic growth, and social change. Comparison of explanatory power and limits of each theory. Review of prospects for synthesis and implications for empirical research in geography and other social sciences.

GEO 720 - Seminar: Latin America
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Repeatable
Research seminar on contemporary problems in human and regional geography, emphasizing development and socio-economic issues.

GEO 730 - Political Economy of Nature
Maxwell School of Citizenship and Public Affairs
3 credit(s) Odd academic yr e.g. 2007-8
Explores the complex relationships between capitalism and the natural environment. It covers both classical and contemporary debates within political economy and geography.

GEO 750 - Seminar: Physical Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Advanced work in climatology, land forms, and other aspects of physical geography.
Repeatable

GEO 754 - Seminar in Environmental History
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Origins of field, key debates, research methods relating to the historical geography of humans and the environment.

GEO 755 - Seminar in Political Ecology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Conceptual origins, theoretical influences, and current debates in political-economic and cultural aspects of nature-society relations. Topics include environmental social movements, theories of nature, environmental justice, environmental conflicts, gender and environment.

GEO 757 - Environmental Sediment Mechanics
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Physical processes of sediment transport in the environment including fluid behavior, sediment properties, roughness of bed forms, resistance to flow, initiation of particle motion, bed-load transport, and relevant practical issues.

GEO 758 - GIS-based Geostatistical Methods and Applications
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Using GIS tools to calculate spatial statistics, identify spatial patterns (local and global), and perform spatial modeling (GWR)
PREREQ: GEO 683 AND 686

GEO 764 - Gender and Globalization
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Repeatable
Repeatable application of demographic measurements to Specialized research topics dealing with the
3 credit(s) Upon sufficient interest
Maxwell School of Citizenship and Public Affairs
GEO 876 - Feminist Geography
Maxwell School of Citizenship and Public Affairs

Examination of major currents in western cultural theory from the industrial revolution to the present,
their development and transformation in light of advances in spatial theory.
Repeatable

GEO 773 - Seminar in Economic Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Examination of contemporary debates in economic geography including the impact of the cultural
and institutional turn. Also examines economic geography perspectives on globalization, labor, innovation, and restructuring. Permission of instructor.

Repeatable

GEO 774 - Seminar: Historical Geography
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Research seminar on current historiographic issues and archival methodologies in historical geography.
Repeatable

HST 615 - Graduate Preparation
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Participation in a discipline- or subject-related seminar conducted at the Syracuse University
instructor. Permission of advance, of assigned instructor, department chair, or dean.
Repeatable

HST 600 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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 615 - Graduate Preparation
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Sections offered corresponding to the major areas of history so graduate students may prepare for
more advanced graduate study.
Repeatable

HST 620 - The East Asian Century?
Opportunities and Challenges for the Region & the US
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 620
Double Numbered with: HST 420
Examines the trajectories of and interactions between China, Japan, and Korea, with a focus on the implications of these developments for the region and the United States.

HST 625 - The European Union
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: SOS 625
Interdisciplinary introduction to history, politics, and economics of the European community.

HST 626 - African American Urban History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Crosslisted with: AAS 626
Double Numbered with: HST 426
This seminar will examine the complex and varied Black urban experiences in the 20th and 21st
centuries from the 1890s to the present.

HST 634 - Underground Railroad
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Crosslisted with: AAS 634, ANT 694
Double Numbered with: HST 434
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 635 - European Perspectives on Contemporary War and Conflict
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Crosslisted with: PAI 635
Seminars conducted at the Syracuse University campus with a week in London to examine the evolution of armed interventions. Meetings with scholars and practitioners in London will bring European perspectives to contemporary conflicts.
HST 644 - Israel and Palestine: Historical Approaches
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: MES 644
A thorough historical grounding for understanding contemporary Israel and Palestine in terms of changing social, economic, cultural and political contexts.

HST 645 - History of International Relations
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: PAI 645
Provide professional masters-level students with a solid grounding in the history of international relations around a common theme of states and empires throughout various important time periods.

HST 682 - Foundations of American Political Thought
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 716, SOS 716
American political thought to about 1820. Puritans, American Revolution, establishment of the Constitution, and thought of Hamilton and Jefferson.

HST 689 - Race and Law
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Race and law in American history, 1600-1960, the historical experience of African-Americans, the indigenous peoples, and Asian-Americans.

HST 690 - Independent Study
Maxwell School of Citizenship and Public Affairs
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

HST 693 - Oral History Workshop
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: DFH 693
Examines the practice of oral history from methodological and theoretical levels, the differences between individual and collective memories, and its application to analysis of events, ethical dimensions, and technological tools.

HST 695 - Historical Narratives and Interpretation
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: DFH 695
Comparison and exploration of the documentary and the written word as alternative formats for presenting history. Documentaries and historical writings are examined and discussed using case studies.

HST 700 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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 715 - Readings and Research in American History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Readings and research on a topic or theme in American History of the instructor's choosing. Repeatable

HST 725 - Readings and Research in Latin American History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Secondary readings in Latin American history. Repeatable

HST 735 - Readings and Research in European History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Readings and research on a topic or theme in European History of the instructor's choosing. Repeatable

HST 738 - American Legal History: Modern Public Law
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
A history of American constitutional law from reconstruction to c. 1960.

HST 755 - Readings and Research in Eastern European History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Secondary literature in Eastern European history.

HST 765 - Readings and Research in African History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Crosslisted with: AAS 765
Readings and research on a topic or theme in African History of the instructor's choosing.

HST 775 - Readings and Research in South Asian History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Crosslisted with: SAS 775
Graduate seminar introducing main debates in the historiography of late medieval and modern South Asia.

HST 800 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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

HST 801 - Historiography
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring

HST 802 - Modes of Analysis in History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
The colloquium will discuss a large variety of articles and monographs in European and American history.

HST 803 - Theories and Philosophies of History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
History of historical thought and practice in the development of modern historical method.

HST 804 - First-Year Graduate Research Seminar
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Seminar geared to particular research interests of first-year students.

HST 805 - Seminar in American History
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Readings and research on a topic or theme in American History of the instructor's choosing.
HST 806 - Seminar in European History
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Readings and research on a topic or theme in European History of the instructor's choosing.

HST 950 - Documentary Film and History Program Paper
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Alternative to TRF 650 for Documentary Film and History students. Substantial research paper with accompanying documentary treatment.

HST 990 - Independent Study
Maxwell School of Citizenship and Public Affairs
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. Repeateable

HST 996 - Graduate Readings
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
To be used for field exam study. One year of coursework in the Ph.D. program is required. Repeateable 1 time(s), 6 credits maximum

HST 997 - Masters Thesis
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) Every semester
Repeateable

HST 999 - Doctoral Dissertation
Maxwell School of Citizenship and Public Affairs
1-15 credit(s) Every semester
Repeateable

Middle Eastern Studies
MES 626 - Beyond the Veil: Gender Politics in Islam
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: REL 626
Double Numbered with: MES 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.

MES 644 - Israel and Palestine: Historical Approaches
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Crosslisted with: HST 644
A thorough historical grounding for understanding contemporary Israel and Palestine in terms of changing social, economic, cultural and political contexts.

MES 668 - Middle East in Anthropological Perspective
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: ANT 668, PAI 668
Double Numbered with: MES 468
Anthropology of the social, cultural, geographical, and political realities of the Middle East. Additional work required of graduate students.

MES 682 - Social Theory and Middle East Politics
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: PSC 682
Orientalist, Marxian, Weberian, and postmodern viewpoints about such issues as colonialism, Islamism, nationalism, secularism, authoritarianism, modernity, and patriarchy in the Middle East.

MES 684 - International Relations of the Middle East
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: PSC 682
Explores ways that health inequalities occur.

MES 684 - International Relations of the Middle East
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PAI 684, PSC 684
Analysis of some of the central issues of contemporary regional and international politics of the Middle East.

MES 690 - Independent Study
Maxwell School of Citizenship and Public Affairs
1-6 credit(s)
Repeateable

MES 707 - Culture in World Affairs
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Crosslisted with: ANT 707, PAI 707
A systematic survey of the ways in which local, organizational, and transnational issues in world affairs are affected by culture.

Master of Public Health
MPH 601 - Principles of Epidemiology
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
A focus on epidemiologic concepts and methods including design and analytic studies, such as aggregate, case series, cross-sectional; case-control, and cohort studies; application of epidemiology to public health practice; communication; and dissemination of epidemiologic findings.

MPH 602 - Principles of Biostatistics
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Prepares students for biostatistical aspects of public health decision making, and research. Focuses on probability and statistical inference. Topics include discrete and continuous probability models; expectation and variance; inference; graphical displays; and data transformations.

MPH 603 - Principles of Environmental Health
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
An introduction to the principles, methods, and issues related to environmental health sciences.

MPH 604 - Social and Behavioral Dimensions of Public Health
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Covers various aspects of public health research, theory, and practice; social determinants of population health, health promotion and behavior change, and health inequalities. Also focuses on individual-level health risks and macro-level policies and systems in which health inequalities occur.

MPH 605 - Public Health Practice
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
The first of two 3-credit courses intended to provide an introduction to a series of contemporary issues in public health practice.

MPH 606 - Public Health Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Introduces essential elements of health policy and explores ways that health policy shapes the healthcare environment and impacts population health through case studies and multi-level discussions.

MPH 607 - Public Health Administration
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
An introduction to major health policy and management competencies. Issues related to planning, organization, administration, management, evaluation and policy analysis of public health programs will be explored.
MPH 642 - Mixed Research Methods in Public Health
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
The use of a range of research methods focused on public health. Includes instruction in research design, quantitative analysis of data, qualitative data collection methods and analysis, and presentation of results to diverse audiences.
PREREQ: MPH 601 OR MPH 602

MPH 652 - Infectious Disease Epidemiology
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Explores and covers the epidemiology of infectious diseases and covers basic epidemiologic methods, pathogenesis of selected infectious diseases, case studies on performing outbreak investigations and developing population studies to understand spread, transmission and prevention strategies. Enrollment in Master of Public Health Degree program is required.
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MPH 653 - Chronic Disease Epidemiology
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Current information on chronic disease epidemiology, survey and biological methods for exposure measurement in epidemiologic studies; leading chronic diseases, measurement of disease, lifestyle, nutrition, occupation, and family history. Enrollment in Master of Public Health Degree program is required.

MPH 654 - Grant Writing in Public Health
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Overview of planning, writing, and managing requests for funding in a public health context, including the drafting of a grant proposal for an agency of the student's choice. Enrollment in Master of Public Health Degree program is required.

MPH 655 - Advanced Epidemiology
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Builds on principles and methods in design and conduct of epidemiologic studies. Topics include epidemiologic study designs; secondary data and evaluation of measurement and information bias; confounding and effect modification; validity and precision in research.
PREREQ: MPH 601, MPH 602

MPH 656 - Health Services/Outcomes Research
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Focuses on monitoring of health status, quality of life in populations and clinical settings, as well as survey and secondary data base methodologies.

MPH 657 - Advanced Research Methods in Public Health
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Applies knowledge of public health to planning, execution, and reporting of research. Topics include: writing, research and design methods; construction of measuring instruments, experimental procedures, and laboratory setups; analysis and interpretation of data.

MPH 658 - Economics for Public Health Practitioners
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Introductory health economics course aimed at public health practitioners. Broad foundation in the demand and supply of health care and financing of personal and public health services. Economic concepts will be examined through public health examples.

MPH 661 - Advanced Biostatistics
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Problem-oriented probability distributions, moments estimation, parametric and nonparametric inference for one-sample and two-sample problems, analysis of frequency data, linear regression, and correlation analysis, with emphasis on use of computers.
PREREQ: MPH 602

MPH 667 - Statistical Methods for Categorical Data
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Covers statistical methods for analyzing categorical (nominal and ordinal) data which are frequently encountered in public health and biomedical research.
PREREQ: MPH 602, MPH 661

MPH 668 - Principles of GIS for Public Health Research and Practice
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Introduce the basic principles and methods of Geographic Information Systems and enable the student to apply these skills and knowledge to investigate public health problems.
PREREQ: MPH 601, MPH 603

MPH 700 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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.

Native American Studies

NAT 600 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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 638 - Native American Health Promotion
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
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 645 - Public Policy and Archaeology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: HTW 638
Double Numbered with: NAT 438
Double Numbered with: NAT 445
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 647 - Archaeology of North America
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: ANT 645
Double Numbered with: NAT 445
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.

NAT 656 - Representations of Indigenous Peoples in Popular Culture
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: ANT 656
Double Numbered with: NAT 456
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 659 - Contemporary Native North American Issues**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
Crosslisted with: ANT 659
Double Numbered with: NAT 459

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 661 - Museums and Native Americans**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
Crosslisted with: ANT 661
Double Numbered with: NAT 461

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.

**Public Administration & International Affairs**

**PAI 515 - China in Transition**
Maxwell School of Citizenship and Public Affairs

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.

**PAI 580 - International Course**
Maxwell School of Citizenship and Public Affairs

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

**PAI 601 - Fundamentals of Conflict Studies**
Maxwell School of Citizenship and Public Affairs

3 credit(s)
Crosslisted with: SOS 601

Introduction to a broad range of areas related to the analysis and resolution of conflict, focusing on the interdisciplinary study of defining, understanding, and addressing conflict.

**PAI 624 - Dictatorships, Human Rights, and Historical Memory in the Southern Cone**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Every semester
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.

**PAI 626 - Cultures and Politics of Afghanistan and Pakistan**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
Crosslisted with: ANT 626, SAS 626

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.

**PAI 632 - International Public and Non-Governmental Organization Management**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
How international and non-governmental organizations manage three key functions: regime creation, information mobilization, and norm enforcement. Organizations examined from management perspective in terms of functions, through specific case studies. Offered as a distance education course.

**PAI 633 - Evaluation of International Programs and Projects**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
Concepts and methods of program and project evaluation as practiced in international public and non-governmental organizations.

**PAI 635 - European Perspectives on Contemporary War and Conflict**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Upon sufficient interest
Crosslisted with: HST 635

Seminars conducted at the Syracuse University campus with a week in London to examine the evolution of armed interventions. Meetings with scholars and practitioners in London will bring European perspectives to contemporary conflicts.

**PAI 641 - Negotiating Resolution of International Conflict**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
International and community conflict, characteristics, negotiation, collaborative problem solving, process advice. International conflict escalation, stalemate, de-escalation, settlement, resolution, or management.

**PAI 645 - History of International Relations**
Maxwell School of Citizenship and Public Affairs

3 credit(s)
Crosslisted with: HST 645

Provide professional masters-level students with a solid grounding in the history of international relations around a common theme of states and empires throughout various important time periods.

**PAI 655 - Global Information Technology Policy**
Maxwell School of Citizenship and Public Affairs

3 credit(s) At least 1x fall or spring
Policy implications of the increasingly important interaction between information technology development and the governance process.

**PAI 658 - Contemporary Issues in Turkey**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Every semester
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.

**PAI 665 - Applied Global Health Practice and Policy**
Maxwell School of Citizenship and Public Affairs

3 credit(s) At least 1x fall or spring
Crosslisted with: HTW 665

Applied practice of global health, focused in developing countries, through grounding in current global health practice and policy review and multidisciplinary global health classroom projects.

**PAI 668 - Middle East in Anthropological Perspective**
Maxwell School of Citizenship and Public Affairs

3 credit(s) Irregularly
Crosslisted with: ANT 668, MES 668

Anthropology of the social, cultural, geographical, and political realities of the Middle East. Additional work required of graduate students.
PAI 670 - Experience Credit
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) Every semester
Crosslisted with: PSC 670
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

PAI 684 - International Relations of the Middle East
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: MES 684, PSC 684
Analysis of some of the central issues of contemporary regional and international politics of the Middle East.

PAI 700 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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

PAI 701 - Seminar on Multilateral Peacekeeping
Maxwell School of Citizenship and Public Affairs
3 credit(s)
Crosslisted with: ANT 701
One-week intensive course in New York City between fall and spring semesters with follow-up sessions in Syracuse. Combination of peacekeeping theory, analysis, and practice of operations. Speakers from United Nations, nongovernmental organizations, and U.S. government.

PAI 702 - Development in Africa: Challenges, Constraints, and Strategies
Maxwell School of Citizenship and Public Affairs
3 credit(s) Only during the summer
Current development issues, constraints on development, and strategies aimed at achieving development in Africa. Offered in Washington, D.C.

PAI 703 - Current Issues in US-Latin American Relations
Maxwell School of Citizenship and Public Affairs
3 credit(s) Only during the summer
Real world policy issues currently affecting Latin America and the US. The one-week seminar in Washington, DC will include presentations and panel discussions by practitioners in the field.

PAI 704 - Quantitative Skills in International Relations
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
The diverse sources and methods used to collect data upon which decisions are made. Course aimed to help train IR professionals in tools needed to better develop and implement programs and policies.

PAI 705 - Research Design for IR Practitioners
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
An overview of how social science research is conducted and how it can be used in policy-making in international affairs.

PAI 706 - International Relations Capstone Seminar
Maxwell School of Citizenship and Public Affairs
1 credit(s) At least 1x fall or spring
Develop students to be effective players in the global workplace. Course ties the IR program together, marrying the academic components of student learning to the practical aspects of working in an international career.

PAI 707 - Culture in World Affairs
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: ANT 707, MES 707
A systematic survey of the ways in which local, organizational, and transnational issues in world affairs are affected by culture.

PAI 708 - Issues for 21st Century Public Diplomacy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Exploration of the state of public diplomacy: its place in U.S. statecraft, the evolving roles and relations of U.S. Government departments and agencies with regard to publics here and abroad.

PAI 709 - Research Consultancy in Public Diplomacy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Structured, supervised research projects by student teams that involve extensive interviews, data analysis, findings and recommendations to help sponsoring organizations deal with communication problem or opportunity.

PAI 710 - International Actors and Issues
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Introduction to critical actors and issues in the international arena, including how social science theories help explain developments and inform policy choices.

PAI 711 - Practicum in International Organizations
Maxwell School of Citizenship and Public Affairs
6 credit(s) Only during the summer
Provides a practical and theoretical overview of international organizations and their role in international affairs. Seminar participants combine working in a Geneva-based international organization with a series of lectures, readings, and writing assignments. Offered in Geneva only.

PAI 712 - Public Organizations and Management
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Behavioral systems and management theories and practices in the modern organization. Practical exploration of functions and dysfunctions of various public organizations (governmental and nonprofit) in relation to personal, social, and cultural values.

PAI 713 - Governance and Global Civil Society
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 703
Survey of perspectives and literatures on global civil society organizations and transnational NGOs. Begins the process of integrating these literatures through critical analysis.

PAI 715 - Topics in Global Development
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Seminars by leading practitioners in the field at Syracuse University Greenberg House in Washington, D.C. The institutions and issues involved in the development process. Professional skills needed for career opportunities. Repeatable

PAI 716 - Economic Dimensions of Global Power
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Explores the ways in which growing economic interdependence shifts the locus of global wealth; and ongoing technological change affect the ability of state and non-state actors to exert influence.

PAI 717 - International Security
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Theoretical approaches to study of international
Maxwell School of Citizenship and Public Affairs

security; central issues shaping current debates. Investigates causes of war, strategies for avoiding conflict, impact of new technologies, actors, and ideas on calculations about the use of force.

**PAI 718 - United States National Security: Defense and Foreign Policy**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) Irregularly  
Crosslisted with: PSC 706  
Current problems in planning and administering national security policy in the United States.

**PAI 719 - Fundamentals of Post-Conflict Reconstruction**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) At least 1x fall or spring  
Crosslisted with: PSC 719  
The goal of this class is to provide students with a broad overview of the field of post-conflict reconstruction (PCR) from both a theoretical and applied point of view. Over the course of the semester we will consider the various goals of PCR work, the range of actors that conduct it and the lessons learned from its application across various settings.

**PAI 720 - Principles of Economics**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) At least 1x fall or spring  
Broad-based background in both micro- and macro-economics for MAIR students whose career aspirations do not require substantial training in these economics specialties.

**PAI 721 - Introduction to Statistics**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) At least 1x fall or spring  
Basic inferential statistics (point and interval estimation, hypothesis testing). Descriptive statistics (measure of central tendency, variation, bivariate and multivariate association).

**PAI 722 - Quantitative Analysis**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) At least 1x fall or spring  
Quantitatively oriented models used in policy analysis, program evaluation, and forecasting. Linear, mathematical, probabilistic, and cost-benefit models.  
PREREQ: PAI 721

**PAI 723 - Economics for Public Decisions**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) Every semester  
Application of micro-economic analysis to public policy problems. Designed for those with limited background in economics. Use of basic economic reasoning to help untangle complex policy problems.

**PAI 724 - Computer Applications for Public Managers**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) At least 1x fall or spring  
Introduction to effective use of the computer to manage complex and voluminous data found in public sector organizations. Focus on information management issues and productivity enhancement.

**PAI 725 - Global Europe Seminar**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) Irregularly  
Economic, social, and political issues on an integrated Europe. Guest speakers from local research institutes, student presentations, and discussions with scholars and practitioners on the challenges of European integration. Offered in Europe, exact location varies.

**PAI 726 - Global Energy, Economics and Geopolitics**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) Only during the summer  
International energy issues and their interactions with development concerns, human rights, environment, geopolitics, and regional rivalries, among other topics. Held in DC with site visits and guest speakers.

**PAI 727 - Responding to Proliferation of Weapons of Mass Destruction**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s)  
Dangers caused by the proliferation of weapons of mass destruction and strategies to address this threat. National and international efforts ranging from diplomacy to arms control to counter-proliferation strategies.

**PAI 728 - National Planning and Capacity to Govern**  
*Maxwell School of Citizenship and Public Affairs*  
3 credit(s) Irregularly  
Current problems of long-run policy making and execution. Social and political preconditions and consequences of economic, defense, development, or social planning. Problems of intergenerational fairness, forecasting, freedom, administration, and public private sector relationships.

**PAI 730 - Problems in Public Administration**  
*Maxwell School of Citizenship and Public Affairs*  
1-3 credit(s) Every semester  
May include specific courses focusing on international economic development; nonprofit and international non-governmental organization management; federal policy formulation; technology and governance issues; e-government; GIS mapping, and dispute resolution management.
Primary objective to analyze health care problems from an economic perspective. Prereq (for ECN 655): ECN 601 or equivalent; (for PAI 736): PAI 723.

**PREREQ:** PAI 723

**PAI 738 - US Intelligence Community: Governance & Practice**

*Maxwell School of Citizenship and Public Affairs*

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

Key phases and specific events of the US Intelligence Community will be explored, along with governance and oversight. Students will study the functional elements of intelligence tradecraft and engagement with international counterparts.


*Maxwell School of Citizenship and Public Affairs*

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

Governance and execution of National strategy by the Department of Defense, the Joint Staff and Combatant Commanders; national command and control of military forces; case studies of joint and combined operations overseas.

**PAI 741 - Social Media in the Public and Non-Profit Sector**

*Maxwell School of Citizenship and Public Affairs*

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

Overview of current practices for managing Information assets produced by government and its stakeholders using social media applications. Interactive information structure analyzed through management, technology and organizational components.

**PAI 742 - Public Administration and Law**

*Maxwell School of Citizenship and Public Affairs*

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

Legal developments relevant to public administration in United States. Legal and administrative theory. Specific cases. Role of courts in contemporary public administration.

**PAI 743 - The Administrator in the Political Environment**

*Maxwell School of Citizenship and Public Affairs*

3 credit(s) Irregularly

Interaction of public bureaucracies with political executives, legislatures, courts, interest groups, and the general public. Concepts of bureaucratic accountability and representation.

**PAI 744 - Metropolitan Government and Politics**

*Maxwell School of Citizenship and Public Affairs*

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

Current problems of urban management: centralized versus decentralized metropolitan government; fiscal strain; delivery of municipal services; collective bargaining; governmental accountability.

**PAI 745 - Intergovernmental Relations**

*Maxwell School of Citizenship and Public Affairs*

3 credit(s) Irregularly

Forces, theories, and institutions that have shaped and are shaping the centralization and localization of foci of governmental power, especially the American system.

**PAI 746 - Ethics and Morality in Public Affairs**

*Maxwell School of Citizenship and Public Affairs*

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

Helps the student understand the nature of his or her own ethical and moral commitments as they relate to public affairs. Selected literature in philosophy, sociology, political science, law, and public administration.

**PAI 747 - Human Resources Management for the Public Sector**

*Maxwell School of Citizenship and Public Affairs*

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

Theory, research, and practices for effective human resources management in public and nonprofit agencies. Political and institutional context of public sector human resources management, evolution of U.S. civil service system, critical issues confronting public managers.

**PAI 748 - Seminar on Nonprofit Management**

*Maxwell School of Citizenship and Public Affairs*

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

Attributes of the nonprofit sector as compared with government and business; public policy relationships that intertwine these sectors, highlight distinctive skills and talents needed for effective leaders in the nonprofit sector.

**PAI 749 - Financial Management in Nonprofit Organizations**

*Maxwell School of Citizenship and Public Affairs*

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

Fundamental concepts of accounting and financial management and issues relevant to charitable, tax-exempt nonprofit organizations; how financial information and analysis are used in management and policy-making in the public sector.

**PREREQ:** PAI 734

**PAI 750 - Managing Interpersonal, Group and Systemic Conflict**

*Maxwell School of Citizenship and Public Affairs*

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

Introduces concepts, skills, and processes used by collaborative managers to achieve results. Students learn skills and processes needed to manage conflict or lead collaboration at the individual, group, and organizational and system levels.

**PAI 751 - JD/MPA Seminar**

*Maxwell School of Citizenship and Public Affairs*

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

Impact of courts on public management and public policy. Open to JD/MPA students only. Satisfies University’s comprehensive requirement for master's program. Prereq: JD/MPA student status.

**PAI 752 - MPA Workshop**

*Maxwell School of Citizenship and Public Affairs*

3 credit(s) Only during the summer

Consulting assignment that addresses current topics in public management. Objective of team project is application of MPA subject matter and techniques. Prereq: Completion of majority of MPA coursework.

**PAI 753 - Leadership and Public Policy**

*Maxwell School of Citizenship and Public Affairs*

3 credit(s) Only during the summer

Simulation exercise involving current public policy issues. Focus on politics of formulating and setting policy. Satisfies the University's comprehensive requirement for a master's degree.

**PAI 755 - Public Administration and Democracy**

*Maxwell School of Citizenship and Public Affairs*

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

Public policy and administration in the context of a constitutional democracy. Relationships between administrative and constitutional values.

**PAI 756 - International Development Policy and Administration**

*Maxwell School of Citizenship and Public Affairs*

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

The course provides an overview of the key concepts, actors and institutions, as well as policy context and goals in the field of international development cooperation/foreign aid.

**PAI 757 - Economics of Development**

*Maxwell School of Citizenship and Public Affairs*

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

Crosslisted with: ECN 661

Economic development in international settings. Labor and employment, population, education, health and nutrition. Why some countries have rapid economic development, and others low growth and pervasive poverty.

**PREREQ:** PAI 723 OR ECN 601

**PAI 758 - Public Finance in Developing Areas**

*Maxwell School of Citizenship and Public Affairs*
Involvement of government, UN agencies, NGO's, for women, children, refugees, displaced people. Challenges since 1992. Disasters caused by nature and man:

**PAI 767 - Fund Development for Nonprofit Organizations**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Theory and practice of fund development for nonprofit organizations. Students develop portfolio of fund development for real nonprofit organization.

**PAI 768 - Policy and Management in the Nonprofit Economy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
The nonprofit sector as part of the larger US economy. Structure of industry, the practical effects of nonprofit tax status, fundraising, volunteer and board management, and the sector's relationship to the government among others.

**PAI 769 - Public Sector Reform**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Profound changes in structure of public sector which have occurred in many countries over the last two decades. How structure has changed, consider why changes took place, and make judgments about the desirability of these changes.

**PAI 770 - Climate Change: Science, Perception, and Law**
Maxwell School of Citizenship and Public Affairs
3 credit(s)
An interdisciplinary exploration of the challenges posed by climate disruption and how to face this most pressing of issues.

**PAI 771 - Public Management of Technology**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Public management of technology from a variety of perspectives. Governmental roles as developer, promoter, regulator, and user of new technology. Support of scientific research and uses of technical information in decision making.

**PAI 772 - Science, Technology, and Public Policy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Variety of concepts concerned with the interaction of science and technology and government.

**PAI 773 - Technology and Its Processes**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Descriptive survey of selected technologies and technological developments. Technical and scientific aspects rather than economic and political impact.

**PAI 774 - Public Policy and Program Evaluation**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Various approaches to determining effectiveness of public programs and policies, emphasizing experimental and quasi-experimental designs for evaluation. Strategies, politics, and logistics of policy evaluation.

**PAI 775 - Energy, Environment and Resources Policy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Relation of government to policymaking in the domain of energy, environment, and resources; politics of administration at all levels of government; comparative international aspects of these environmental issues.

**PAI 776 - Economics of Science and Technology**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: ECN 776
Interaction of technological change and policy. Introduction to the economic analysis of knowledge as a public good. Diffusion of knowledge and the role knowledge transfer plays in the industrialized world and in the economic growth of developing nations.

**PAI 777 - Economics of Environmental Policy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: ECN 777
How economic incentives may lead to environmental problems and how government policy can maintain or improve environmental quality. Methods for valuing the benefits of environmental amenities and the effects of environmental policy on economic growth.

**PAI 778 - Development Finance: Building Inclusive Financial Systems**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: ECN 778
Focus on how to build the policy and institutional infrastructure for delivering financial services that serve the poor.

**PAI 779 - Social Policy: Financing the Poor**
Maxwell School of Citizenship and Public Affairs
PAI 781 - Social Welfare Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
The American system of public policy toward social concerns: problem and needs analysis, program development and evaluation; implementation and management in health education, welfare reform, aging, etc.

PAI 782 - Health Services Management
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Roles and functions of managers in health services organization. Issues in accountability. Unique role involving work with various disciplines: medical, nursing, social work, insurance, finance, etc.
PREREQ: PAI 783

PAI 783 - The Changing American Health Care System
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Components of U.S. health care system. Evolution of health care organizations, personnel and their relationships. Environment of integrated delivery systems, managed care, and finance systems for health care; public policy implications of these changes in the public health and social services systems.

PAI 784 - Education Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Overview of education policies designed to reform American schools and school systems. Topics include market based reforms, enhanced accountability, teacher recruitment and compensation plans, and decentralization, among others.

PAI 785 - Policy Implementation
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Issues of implementation of domestic and international programs and policies; explores various roles that elected officials, public managers, NGOs, and contractors play in program implementation and how these actions affect the larger policy-making process; develop skills to improve implementation efforts.

PAI 786 - Urban Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Recent evidence of urban problems; housing markets, neighborhood change and housing policy; discrimination, segregation, and racial transition; urban poverty and welfare programs; urban employment and economic development programs; urban education.
PREREQ: PAI 723 OR ECN 601

PAI 787 - Child and Family Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Applying microeconomic theory to the study of family. Focuses on the theoretical models developed to inform our understanding of theory, including marriage and divorce; fertility; employment; and human capital.

PAI 788 - Global Issues: Drugs, Crime and Terrorism
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Transnational issues of drugs, crime, and terrorism; impacts of each on United States national interests and foreign policies of the United States and other countries and the national/international organizations and laws created to deal with these issues.

PAI 789 - Advanced Policy Analysis
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Key steps in policy analysis: (1) assessing alternative rationales for government policy; (2) developing policy alternatives; (3) analyzing alternatives through a variety of analytical techniques; (4) communicating results; and (5) adopting and implementing policy.
PREREQ: PAI 721, PAI 723

PAI 791 - Education Financial Administration
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Overview of the major concepts and tools involved in the financial administration of a school district. Topics include evaluation of revenue sources, budgeting, financial management, and government accounting.
PREREQ: PAI 734

PAI 792 - Managing School District Non-Instructional Functions
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Overview of concepts and tools used in the management of non-instructional functions of a school district. Topics include management of finances, payroll, facilities, procurement, risk, transportation, food service, and information technology.

PAI 793 - The Changing American Health Care System
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Transnational issues of drugs, crime, and terrorism; impacts of each on United States national interests and foreign policies of the United States and other countries and the national/international organizations and laws created to deal with these issues.

PAI 794 - Education Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Applying microeconomic theory to the study of family. Focuses on the theoretical models developed to inform our understanding of theory, including marriage and divorce; fertility; employment; and human capital.

PAI 795 - Policy Implementation
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Issues of implementation of domestic and international programs and policies; explores various roles that elected officials, public managers, NGOs, and contractors play in program implementation and how these actions affect the larger policy-making process; develop skills to improve implementation efforts.

PAI 796 - Urban Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Recent evidence of urban problems; housing markets, neighborhood change and housing policy; discrimination, segregation, and racial transition; urban poverty and welfare programs; urban employment and economic development programs; urban education.
PREREQ: PAI 723 OR ECN 601

PAI 801 - Intellectual History of Public Administration
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Analyze the historical, cultural and intellectual currents that undergird theories and concepts in public administration.

PAI 802 - Public Organization Theory and Research
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Seminar will address the central questions of: organizations as units of analysis; public and private organizations; structure; relationships; decision making and leadership; and motivations and incentives.

PAI 803 - Quantitative Methods I: Research Methods for Public Administration
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
The objective of this course is to introduce students to the logic, design, and conduct of applied social research for students interested in public management and policy.

PAI 804 - Quantitative Methods II: Research Methods for Public Administration
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
The second course in the methodology sequence for Public Administration Ph.D. students, course covers the use of regression analysis for social sequence research, including OLS regression, heteroskedasticity, autocorrelation, and instrumental variables techniques.
PREREQ: PAI 803

PAI 810 - Advanced Seminar: Policy and Administration
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Special problems in the politics, substance, or methodology of policy making, or in the execution, administration, or evaluation of public policy. Repeatable

PAI 811 - Quantitative Methods III: Advanced Quantitative Methods Seminar
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Develop a familiarity with advanced multivariate statistical techniques, recognize special analytic problems, and develop a capacity to present and interpret statistical results and their implications.
PREREQ: PAI 803 AND PAI 804
PAI 812 - Public Finance  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Course covers selected topics in state and local public finance at the Ph.D. level. Specifically designed for Ph.D. students in the Public Administration Department.

PAI 890 - Independent Study  
Maxwell School of Citizenship and Public Affairs  
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

PAI 895 - Mid-career Training Group  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) At least 1x fall or spring  
Core seminars for mid-career administrators who have had some years of experience in government or public service institutions to prepare them for responsible management posts. Repeatable 1 time(s), 6 credits maximum

PAI 896 - Mid-career Training Group  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Core seminars for mid-career administrators who have had some years of experience in government or public service institutions to prepare them for responsible management posts.

PAI 897 - Fundamentals of Policy Analysis  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Every semester  
Provides an understanding of some of the models and methods used in policy analysis for the public and nonprofit sector.

PAI 930 - Readings and Research on Public Administration and Policy  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) Every semester  
Crosslisted with: PSC 911  
Repeatable 2 time(s), 9 credits maximum

PAI 996 - Master’s Project Paper  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Every semester  
Preparation of final paper: case study, policy analysis, or management study. Design, description, analysis, and policy recommendations. Required for M.A. in public administration (mid-career students only). Repeatable

PAI 999 - Dissertation  
Maxwell School of Citizenship and Public Affairs  
1-15 credit(s) Every semester  
Repeatable

Political Science

PSC 500 - Selected Topics  
Maxwell School of Citizenship and Public Affairs  
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 600 - Selected Topics  
Maxwell School of Citizenship and Public Affairs  
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 602 - Public Policy Analysis: Theory and Practice  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Crosslisted with: SOS 604  
Overview of policy literature, including political economy and practical politics. Formal analyses and case studies.

PSC 606 - Public Policy Analysis: Theory and Practice  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Political parties, interest groups, and electoral behavior in American political context.

PSC 612 - Development of the American Administrative State  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Origins, development, and character of the American administrative state from 1877 to the present. Welfare state, regulatory state, and the civil state.

PSC 620 - The East Asian Century? Opportunities and Challenges for the Region & the US  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Crosslisted with: HST 620  
Double Numbered with: PSC 420  
Examines the trajectories of and interactions between China, Japan, and Korea, with a focus on the implications of these developments for the region and the United States.

PSC 621 - Theories of American Politics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Basic introduction to the ways in which political scientists have conceptualized and studied American politics, primarily through an examination of influential approaches and “classic” works.

PSC 651 - Theories of International Relations  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Contemporary theories of international relations. Approaches to understanding and explaining international behavior at single-nation, multipole, and systematic levels.

PSC 670 - Experience Credit  
Maxwell School of Citizenship and Public Affairs  
1-6 credit(s) Every semester  
Crosslisted with: PAI 670  
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 671 - Comparative Political Analysis  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) At least 1x fall or spring  
Major theoretical approaches in comparative analysis: structural functionalism, systems, Marxism, dependency theory. Comparative research techniques: use of elite studies, aggregate data, theory, cross-national surveys, political sociology, diachronic analysis, and causal modeling.

PSC 681 - Comparative State, Society Relations  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Even Academic Yr e.g. 2004-5  
Crosslisted with: AAS 681  
Conceptual, methodological, and theoretical tools in comparing state, society relations, and their political and socioeconomic outcomes in the Pan African world and the rest of the world.

PSC 682 - Social Theory and Middle East Politics  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Crosslisted with: MES 682  
Orientalist, Maxian, Weberian, and postmodern viewpoints about such issues as
colonialism, Islamism, nationalism, secularism, authoritarianism, modernity, and patriarchy in the Middle East.

**PSC 684 - International Relations of the Middle East**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: MES 684, PAI 684
Analysis of some of the central issues of contemporary regional and international politics of the Middle East.

**PSC 690 - Independent Study**
Maxwell School of Citizenship and Public Affairs
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 in the department. Repeatable

**PSC 691 - Logic of Political Inquiry**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Major debates in logic of political inquiry. Includes alternative approaches to explanation and theory, nature of political knowledge, place of values in political inquiry, and policy relevance of political science.

**PSC 693 - Introduction to Quantitative Political Analysis**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Basic statistics, including measures of central tendency and dispersion, hypothesis testing, indices of association, and bivariate analysis. Application of statistics to political science data.

**PSC 694 - Qualitative Political Analysis**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Survey of qualitative methods in political science research. Topics include elite interviewing, participant observation, content analysis, and discourse analysis. Discussions center on research practices and exemplary applications.

**PSC 700 - Selected Topics**
Maxwell School of Citizenship and Public Affairs
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 703 - Governance and Global Civil Society**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PAI 713
Survey of perspectives and literatures on global civil society organizations and transnational NGOs. Begins the process of integrating these literatures through critical analysis.

**PSC 704 - Comparative Political Economy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Political economy of economic growth, redistribution and inequality. Political institutions, origins and evolution. Cross-national variations in economic institutions.

**PSC 706 - United States National Security: Defense and Foreign Policy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: PAI 718
Current problems in planning and administering national security policy in the United States.

**PSC 711 - American Constitutional Development**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Key moments, periods, and themes in American constitutional development. The influence of constitutional ideas and institutions on political development and the influence of political ideas and institutions on the Constitution.

**PSC 712 - Public Opinion and Communication**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Comparative perspective, emphasizing United States. Opinion formation, political communication systems, impact of news media, propaganda, and methods, including opinion surveys and content analysis.

**PSC 713 - Congress and the Presidency**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Separate and shared powers of Congress and the Presidency. Consequences for policy making.

**PSC 715 - Judicial Politics**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Judicial structure and process, emphasizing U.S. Supreme Court. Behavioral and institutional perspectives on judicial attitudes and behavior.

**PSC 716 - Foundations of American Political Thought**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: HST 682, SOS 716
American political thought to about 1820. Puritans, American Revolution, establishment of the Constitution, and thought of Hamilton and Jefferson.

**PSC 718 - Politics and the Environment**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Examines the opportunities and constraints for addressing environmental problems through the political process. Its aim is to understand how problems, political actors, and institutions come together to shape policymaking in this arena.

**PSC 719 - Fundamentals of Post-Conflict Reconstruction**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PAI 719
The goal of this class is to provide students with a broad overview of the field of post-conflict reconstruction (PCR) from both a theoretical and applied point of view. Over the course of the semester we will consider the various goals of PCR work, the range of actors that conduct it and the lessons learned from its application across various settings.

**PSC 749 - International Security Theory**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Explores key controversies and debates in contemporary security studies.

**PSC 752 - International Law and Organizations**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Foundations and application of international law. Institutional and political capability of international organizations. Recent theoretical and methodological development.

**PSC 753 - International Political Economy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Relation between international politics and economics. Neoclassical and leftist approaches to problems of expansion, North-North relations, North-South relations, and system transformation.

**PSC 754 - International Conflict and Peace**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Forms of international conflict and explanations for occurrence and resolution.

**PSC 755 - Politics and Governance in the Information Age**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
The impact of advanced computing and communications technologies on the structure, organization, and behaviors of contemporary systems of public governance.

**PSC 756 - Politics of the European Union**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
History, institutions, policies, and political dynamics of the European Union and its relations with the rest of the world.

**PSC 757 - Non-State Actors in World Affairs**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Analysis and assessment of the causes of transnational non-state activism, the means and goals chosen by activists, and the effects of non-state actors in international and domestic affairs.

**PSC 758 - Global Migration**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Why do people move across international borders, and where do they go? How should local communities, national governments, and international institutions respond? What are the goals of these policies, and are they effective?

**PSC 759 - Crisis Management**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Leadership, cooperation, and conflict in times of crisis. Key dynamics that influence the way decision makers perceive and respond to crisis and the processes that facilitate constructive crisis management.

**PSC 760 - Foreign Policy Seminars**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Selected aspects of foreign policy, such as American foreign policy, Soviet foreign policy, and foreign policy analysis. Repeatable

**PSC 769 - Comparative Parties and Politics**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Political parties, interest groups, the electorate, and legislative behavior in a comparative political context.

**PSC 780 - Seminar on Political Systems**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Political systems and political system change in selected nations and regions. Seminars may focus on one nation/region or they may analyze a substantive topic comparatively. Repeatable

**PSC 781 - Politics of the Developing World**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
The socio-economic, political, and cultural issues shaping people’s lives in more than 140 state-societies that constitute the “Third World.”

**PSC 782 - Politics of China**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Political development, political institutions, and political economy of China and Chinese foreign relations, emphasizing the reform era.

**PSC 783 - Comparative Foreign Policy**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Systematic development of theories of foreign policy not limited to a single nation, decision, situation, or time. Definitions of foreign policy and logic of comparative analysis; historical roots of study of foreign policy; theories of war proneness, change and cooperation; examination of how foreign policy is made.

**PSC 784 - Comparative Social Movements**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Development of the national social movement in Europe, culture and movements, organizations, collective identity, religion, movements and state institutions, comparative political contexts for movements, and others, using cases from Europe, the United States, Asia, and elsewhere.

**PSC 785 - Comparative Civil-Military Relations**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Theory and practice of civil-military relations. 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 786 - Russian and Post-Soviet Politics**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Political institutions and political development of Russia and other post-Soviet and post-communist states, particularly since 1991.

**PSC 787 - Democracy and Democratization**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Nature of modern democracy, contemporary transitions to democracy in countries around the world, problems of democratic consolidation and democratic theory, and the effects of democracy on the economy and world politics.

**PSC 788 - Political Leadership**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
The relationship between what political leaders are like, the behavior of the institutions or governments they lead, and the effects of leaders and leadership on politics.

**PSC 792 - Research Design**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Logic of designing research in political science. Conceptual, theoretical, and empirical analysis. Focus on developing dissertation proposals.

**PSC 793 - Constructing the World Polity**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Survey of constructivist research. Comparisons of constructivist theories, comparisons to other theories of world politics, and reviews of exemplary empirical applications.

**PSC 794 - Advanced Quantitative Political Analysis**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Multivariate data analysis, including regression, causal analysis, time series, and factor analysis. Theoretical uses, implications, and meanings of techniques. Techniques applied through computer analyses using SPSS, SAS.

**PSC 796 - Formal Theories of Choice**
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Production of collective states from individual choice. Role of evaluative concepts like equality, liberty, and rights in such efforts. Design theory, game theory, impossibility theorems, voting rules, distributive justice, market models.

**PSC 797 - Contemporary Normative Theory**
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Major debates in contemporary democratic theory: extent of and rationale for political participation; relation of material and political equality; tension
between liberty and equality. Theories of justice: Rawls, utilitarianism, Nozick.

**PSC 798 - Political Cognition**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Upon sufficient interest  
Research seminar applying constructs and techniques of cognitive science and allied fields to political psychology questions. Foundational works in cognitive science. Applications to participation, socialization, attitude formation, and political decision making.

**PSC 800 - Selected Topics**  
Maxwell School of Citizenship and Public Affairs  
1-6 credit(s) Irregularly  
Seminar  
Repeatable

**PSC 810 - Selected Topics in Public Administration**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Seminar  
Repeatable

**PSC 820 - Selected Topics in American Politics**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Seminar  
Repeatable

**PSC 860 - Selected Topics in International Relations**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Seminar  
Repeatable

**PSC 880 - Selected Topics in Comparative Politics**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Irregularly  
Seminar  
Repeatable

**PSC 901 - Readings and Research on Political Theory and Methodology**  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) Every semester  
Repeatable

**PSC 911 - Readings and Research on Public Administration and Policy**  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) Every semester  
Crosslisted with: PAI 930  
Repeatable 2 time(s), 9 credits maximum

**PSC 920 - Readings and Research on American Politics**  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) Every semester  
Repeatable

**PSC 960 - Readings and Research on International Relations**  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) Every semester  
Repeatable

**PSC 970 - Experience Credit**  
Maxwell School of Citizenship and Public Affairs  
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 980 - Readings and Research on Comparative Politics**  
Maxwell School of Citizenship and Public Affairs  
1-3 credit(s) Every semester  
Repeatable

**PSC 990 - Independent Study**  
Maxwell School of Citizenship and Public Affairs  
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 999 - Dissertation**  
Maxwell School of Citizenship and Public Affairs  
1-15 credit(s) Every semester  
Repeatable

**South Asian Studies**

**SAS 620 - Language Training in Preparation for Research Using Tamil**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Every semester  
Crosslisted with: TML 620  
Language training to prepare students to conduct research in areas that require knowledge of Tamil.  
Repeatable 3 time(s), 12 credits maximum

**SAS 621 - Language Training in Preparation for Research Using Hindi**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Every semester  
Crosslisted with: HIN 620  
Language instruction to prepare students to conduct research in areas that require knowledge of Hindi. Permission of instructor.  
Repeatable 4 time(s), 12 credits maximum

**SAS 622 - Gender & Sexuality in South Asia**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Odd academic yr e.g. 2007-8  
Crosslisted with: ANT 621  
Double Numbered with: SAS 421  
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 626 - Cultures and Politics of Afghanistan and Pakistan**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Even Academic Yr e.g. 2004-5  
Crosslisted with: ANT 626, PAI 626  
Double Numbered with: 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.

**SAS 690 - Independent Study**  
Maxwell School of Citizenship and Public Affairs  
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

**SAS 775 - Readings and Research in South Asian History**  
Maxwell School of Citizenship and Public Affairs  
3 credit(s) Every semester  
Crosslisted with: HST 775  
Graduate seminar introducing main debates in the historiography of late medieval and modern South Asia.
Sociology

SOC 500 - Selected Topics
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) Upon sufficient interest
In-depth selected study of certain social problems.
Repeatable

SOC 600 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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 606 - Quantitative Methods
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Formulation of sociological research questions and the logic of testing and inference. Major quantitative and qualitative methodologies with emphasis on former. Relationship between problems formulation, theoretical perspective, and research methods.

SOC 611 - Sociological Theory
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Examination of theoretical approaches in sociology. Readings include writings by classic and contemporary social theorists, critiques of their theories and empirical writings that attempt to apply theoretical approaches to research studies.

SOC 614 - Introduction to Qualitative Research
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Crosslisted with: EDU 603, WGS 614
Developing and using qualitative methods used by sociologists to conduct research. Underlying assumptions and limitations.

SOC 621 - Contemporary Sociological Theories
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Major contemporary approaches to sociological theory. Reading representative works and comparing their application to selected topics.

SOC 625 - Feminist Organizations
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 625
Double Numbered with: SOC 425
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 627 - New York City: Black Women Domestic Workers
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 627, WGS 627
Double Numbered with: SOC 427
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 635 - Political Sociology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: SOC 335
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 645 - The Caribbean: Sex Workers, Transnational Capital, and Tourism
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: AAS 645, WGS 645
Double Numbered with: SOC 445
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 646 - The Social Impact of the Internet
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: SOC 446
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 648 - The Dynamics of Prejudice and Discrimination
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: SOC 448
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 649 - The Sociology of Evil
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Double Numbered with: SOC 449
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.

SOC 651 - Classics in the Sociology of Religion and Morals
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: ANT 651, REL 651
Classical sociological writings of Emile Durkheim and Max Weber and their contemporary significance.

SOC 663 - Studies in Urban Sociology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest

SOC 664 - Aging and Society
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: WGS 664
Double Numbered with: SOC 364
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 670 - Experience Credit
Maxwell School of Citizenship and Public Affairs
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

SOC 677 - Class, Status, and Power
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Double Numbered with: SOC 377

SOC 704 - Science, Technology, and Society
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly

SOC 714 - Intermediate Social Statistics
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Introduction to multivariate statistical techniques to social science data.
PREREQ: SOC 513

SOC 800 - Selected Topics
Maxwell School of Citizenship and Public Affairs
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

SOC 810 - Readings on Theory and Methodology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Repeatable

SOC 811 - Advanced Seminar in Qualitative Research I
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: EDU 810, WGS 812
Expand fieldwork skills and increase theoretical understanding; emphasis on “thinking qualitatively,” intensive fieldwork.
PREREQ: EDU 603/SOC 614

SOC 812 - Advanced Seminar in Qualitative Research II
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: EDU 815
Applications to issues of special education and related educational or human service settings.

SOC 813 - Advanced Social Statistics
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Examination of some current issues in multivariate analysis. Most issues examined are based on linear model. Focus varies by term. Examples of topics covered are path analysis, non-recursive models, unmeasured variables and measurement issues.

SOC 821 - Feminist Methodologies
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Crosslisted with: WGS 821
The feminist critique and its implications for planning, conducting, and reporting on empirical studies.

SOC 825 - Foundations of Organizational Sociology
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Examines fundamental questions and approaches related to the sociological study of complex, formal organizations. Readings enable students to understand the intellectual development of theory and various historical shifts in emphasis in the field.

SOC 833 - Race, Class and Gender
Maxwell School of Citizenship and Public Affairs
3 credit(s) Upon sufficient interest
Crosslisted with: WGS 833
Intersecting dimensions of inequality that structure social life in contemporary societies. Multiple effects of cross cutting oppressions and privileges, including sexuality and ability/disability.

SOC 997 - Master's Thesis
Maxwell School of Citizenship and Public Affairs
1-6 credit(s) Every semester

SOC 999 - Dissertation
Maxwell School of Citizenship and Public Affairs
1-15 credit(s) Every semester
Repeatable

SOS 601 - Fundamentals of Conflict Studies
Maxwell School of Citizenship and Public Affairs
3 credit(s) Every semester
Crosslisted with: PAI 601
Introduction to a broad range of areas related to the analysis and resolution of conflict, focusing on the interdisciplinary study of defining, understanding, and addressing conflict.

SOS 604 - Public Policy Analysis: Theory and Practice
Maxwell School of Citizenship and Public Affairs
3 credit(s) At least 1x fall or spring
Crosslisted with: PSC 602
Overview of policy literature, including political economy and practical politics. Formal analyses and case studies.

SOS 620 - Interpersonal Conflict Resolution Skills
Maxwell School of Citizenship and Public Affairs
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

SOS 621 - Mediation: Theory and Practice
Maxwell School of Citizenship and Public Affairs
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.

SOS 623 - Leadership: Theory and Practice
Maxwell School of Citizenship and Public Affairs
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.

SOS 624 - Conflict Resolution in Groups
Maxwell School of Citizenship and Public Affairs
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.
SOS 625 - The European Union
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: HST 625
Interdisciplinary introduction to history, politics, and economics of the European community.

SOS 705 - Theories of Development
Maxwell School of Citizenship and Public Affairs
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: GEO 705
Review of theories of development, economic growth, and social change. Comparison of explanatory power and limits of each theory. Review of prospects for synthesis and implications for empirical research in geography and other social sciences.

SOS 716 - Foundations of American Political Thought
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Crosslisted with: HST 682, PSC 716
American political thought to about 1820. Puritans, American Revolution, establishment of the Constitution, and thought of Hamilton and Jefferson.

SOS 750 - Readings and Research in Social Sciences
Maxwell School of Citizenship and Public Affairs
1-9 credit(s) Irregularly
Interdepartmental seminars for graduate students enrolled in the social sciences program. Open to students in the respective disciplines.
Repeatable

SOS 890 - Readings and Research in International Development Policy
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
For students preparing research for Ph.D. or Masters thesis, or in-depth research papers. Permission of instructor.
Repeatable

SOS 991 - Social Science Dissertation Proposal
Maxwell School of Citizenship and Public Affairs
3 credit(s) Irregularly
Seminar in evaluating and developing research design. Application of social science methods to a specific research project. Preparation of detailed dissertation proposal by each student.

SOS 999 - Dissertation
Maxwell School of Citizenship and Public Affairs
1-15 credit(s) Every semester
Martin J. Whitman School of Management

721 University Avenue Suite 215
whitman.syr.edu

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.

Graduate Program Overview
Graduate programs in management have been offered since 1948, and distinguished alumni employed in private, public, and nonprofit sector organizations attest to their quality. As one of our more than 400 full- and part-time graduate students, the student benefits from the sense of community that exists within the relatively close-knit graduate student body, while still being able to take advantage of the resources offered by a major university of 15,000 students.

The Whitman School offers full-time Master's programs in Accounting, Business Administration, MBA, Entrepreneurship & Emerging Enterprises, MS, and Finance along with distance learning programs in Professional Accounting, MS, Business Administration (IMBA), MBA and Supply Chain Management, MS.

Full-Time MBA
Students in the Whitman MBA program at Syracuse University receive a well-rounded education that incorporates both the theoretical background and practical experience needed to succeed in today's ever-changing global economy. The experiential learning component encourages students to apply classroom learning to business problems, connect with decision makers, and deliver tangible results that add value to sponsoring organizations. Students build an experiential portfolio through internships, consulting, specialized courses, community engagement, and other practical experiences that make them more valuable in the marketplace.

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

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.

MS Accounting
The MS in Accounting program at the Whitman School of Management produces graduates with the highest level of professionalism and the educational requirements needed to take the CPA exam in New York and many other states. This rigorous program attracts students with a background in accounting and those with education in other disciplines. If entering with a bachelor's degree in accounting, students complete 30-credits in one year while those without a degree in accounting are required to take up to an additional year of study depending on the student's previous business and accounting coursework.

Whitman MS in Accounting students take advanced courses in financial statement analysis, international accounting, advanced auditing, taxes and business strategy, economics, and statistics along with a variety of electives to complement their career goals. The recently redesigned curriculum prepares students for the expanding roles accounting professionals play in business strategy, consulting, information management, planning, and decision-making.

MS Business Analytics
The MS in Business Analytics challenges students to develop an interdisciplinary understanding of the applications of analytics to the fields of accounting, finance, marketing, and supply chain management through techniques in data collection, data visualization, statistical and pattern analysis, and data mining. The curriculum leverages an understanding of business applications from the Whitman School of Management combined with in-depth technical offerings of the School of Engineering and
students to customize their degree by taking elective courses in any of the following areas: statistics, accounting, economics, investments, risk management, real estate, and corporate finance. With a state-of-the-art trading room, Whitman MS in Finance students have personal access to current market data, live news feeds, software for analysis, and other resources used by professionals in the field, including Bloomberg terminals and Factset (RS1) data through Whitman’s Ballentine Investment Institute.

**MS Supply Chain Management**

The Whitman School is home to the first supply chain program in the country, established in 1919. With an emphasis on managing risk and uncertainty in today’s global supply chains, this 30 credit-hour program consists of the Management Foundation, the Supply Chain Management core, one of several integrative Supply Chain Management “selective” courses, and a culminating experience. Students who have satisfactorily completed the equivalent of any of the required foundation courses in their undergraduate coursework may substitute courses chosen from the approved selective course list. Upon satisfactory completion of all coursework and the culminating experience, students are awarded a Master of Science in Supply Chain Management degree from the Whitman School of Management and Syracuse University.

**iMS Supply Chain (On-Line Distance Learning)**

The Whitman iMS in Supply Chain Management is a distance learning program, with coursework (please see MS Supply Chain Management for details) being completed online and independently with three mandatory residencies each year on the Syracuse University campus.

**Graduate Admissions & Financial Aid**

**Admission**

Candidates with a bachelor’s degree from an accredited college or university are eligible for admission. Full-time MBA, Entrepreneurship & Emerging Enterprises, MS, Finance, MS, Supply Chain Management, MS candidates may apply for fall term admission only. Accounting, MS candidates may apply for fall or spring admission. MBA@Syracuse and Accounting@Syracuse candidates may apply for January, April, July and October admission.

Although no specific undergraduate majors are required for admission, the transition to the rigor of a graduate management program is facilitated by a basic knowledge of economics, mathematics, and the social sciences.

Full-time work experience before applying for admission to our graduate programs is a decided plus. It provides a frame of reference that enables students to relate the concepts and theories presented in class to the real world.

**Financial Aid**

All full-time Whitman graduate candidates are considered for a Whitman merit-based scholarship. Need is not taken into account in the selection process. The awarding process takes into consideration all of the materials submitted in the candidate’s admission application. A number of loan opportunities are available to all full-time students. Part-time students generally take advantage of their employers’ educational benefits. However, loan opportunities are available, provided students enroll in at least 6 credits per semester.

**Additional Information**

Detailed information about application deadlines, admissions requirements, programs, courses, facilities, costs, financial aid, student activities, and services can be found online at whitman.syr.edu. It also includes instructions for submitting an application for admission.

Students interested in graduate management programs at Syracuse should consult the web site for complete information.

**Graduate Career Services**

The Whitman Career Center works in partnership with students to create a personalized career plan that integrates academic training with experiential learning and the acquisition of internship placements that set students on the right path for achieving their career goals. On-boarding begins at the point of admissions with students tackling assignments that create awareness of their strengths, and the application of their experiences to their future goals. At orientation, students address assignments that continue to build a career plan that supports internship placement, selection of a concentration, and identification of experiential learning options. The goal of these efforts is to provide students a holistic viewpoint of their career assets, and the development of lifetime career management skills.

Armed with a career plan, students have access to the SU posting board called “OrangeLink” where employment opportunities are listed for student review and application. In addition, the Whitman Career Center maintains a partnership with MBAFocus, whose resume database is viewed by Fortune 500 corporations as the corporations seek to recruit graduate candidates. The Whitman School uses these systems as a means to promote their students as candidates to businesses throughout the world. Students are also encouraged to take advantage of national career fairs as a means to promote their careers, and to acquire internships and permanent employment.

From the beginning of your degree program through graduation, the Whitman Career Center works in partnership with you to assist you in achieving your career goals.

**Graduate Internships**

Graduate internships provide opportunities
for full-time M.B.A students to gain practical, professionally related experience. These opportunities integrate classroom instruction with activities in the business world. Internships may be for a semester full time, a semester part time, or a summer full time. Companies are asked to provide challenging project-related internships, which may be either salaried or nonsalaried. The intern may combine academic credit with the experience by completing a three-credit independent research project under the direction of a faculty member.

**Study Abroad and Global Internships**

As a pervasive theme in every Whitman School of Management program, managing in a global setting takes on special meaning for Syracuse students who may elect to spend a summer in one of the Syracuse study centers specializing in international business. Students take course credits, work in pre-arranged internships, or experience the cultural and business environments in London, U.K.; Shanghai, China; and Singapore. Syracuse students have studied at several additional sites including: Madrid, Spain; and Hong Kong. Other possibilities, including France and Japan, exist through our cooperative arrangement with the American Graduate School of International Management (Thunderbird) Consortium.

Syracuse students have interned overseas with financial firms such as Morgan Stanley and National Westminster Bank in London, multinationals such as Johnson & Johnson and General Electric in Singapore, and assist in operating small and medium-sized enterprises in China. Interested students should apply early and plan their programs of study to allow for a summer away from campus.

**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 team-oriented 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)

**Accounting, MS**

**Contact**

William J. Walsh, Director, Joseph I. Lubin School of Accounting, 336 Whitman School of Management, 315-443-3589, wiwalsh@syr.edu

**Program Description**

The Master of Science in Accounting program is a 30 credit program for students with qualified undergraduate degrees in accounting. For students with other educational backgrounds, the program length varies from 30 to 63 credits, depending on the number of qualified accounting and management courses completed as an undergraduate or graduate student. M.S. Accounting students complete four required courses and choose a set of electives based on their professional interest and objectives.

**Accreditation**

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920. The M.S. in Accounting degree meets the educational requirements for CPA licensure in New York state and most other 150 hour states.

**Financial Support**

Merit-based financial support is awarded based on a student's admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Program/Federal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

**Degree Requirements & Learning Outcomes**

This is a 30 - 63 credit degree leading to a Master of Science in Accounting.

The rigorous Whitman MS in Accounting program is designed for students of all academic backgrounds. Those entering with a bachelor's degree in business administration with at least 24 credits in accounting courses are eligible for the one-year, 30-credit program. Students without the appropriate coursework in accounting, economics, finance, and quantitative methods may be required to take undergraduate and/or graduate-level foundation courses as part of the program. Total of 30 credits taken in following areas:

- ACC 677 - International Reporting and Analysis 3 credit(s)
- ACC 725 - Financial Statement Analysis 3 credit(s)
- ACC 747 - Advanced Auditing 3 credit(s)
- ACC 757 - Taxes & Business Strategy 3 credit(s)
- Accounting Elective (3 credits)
- 6 credits of business electives chosen from select courses
- Three Electives (9 credits)

**Learning Goal 1:**

Whitman MSA graduates will have an advanced understanding of the major functional areas of accounting.

- MSAs will be able to analyze financial statements and understand the impact...
of accounting and operating decisions on reported financial performance.

- MSAs will understand the impact of business decisions on product and other operating costs and their impact on business performance.
- MSAs will have an understanding of the economic nature of auditing and knowledge of the factors that impact auditor performance.
- MSAs will understand the impact of taxes on business decisions and their strategic implications.

Learning Goal 2:
Whitman MSAs will be effective, persuasive communicators.

- MSAs will be able to utilize effective strategies for communicating with and listening to other individuals and groups.
- MSAs will be able to develop, organize and generate clear and effective professional briefings and reports.
- MSAs will be able to develop and support arguments that are fact-based, conceptually coherent, and compellingly persuasive.

Learning Goal 3:
Whitman MSA graduates will demonstrate skills in accounting research, critical thinking and problem solving, supported by appropriate analytical and quantitative techniques.

- MSAs will be able to research accounting, auditing and tax issues to develop appropriate recommendations and conclusions.
- MSAs will be able to gather, manipulate, and analyze data for purposes of understanding business problems and designing solutions for them.
- MSAs will be able to generate accounting solutions to business problems.

Learning Goal 4:
Whitman MSAs will demonstrate the ability to think strategically about the relationship between business decisions and accounting policy implications.

- MSAs will be able to identify strategic issues and how they are impacted by accounting decisions.
- MSAs will be able to explain and apply concepts, models and tools of strategic analysis.
- MSAs will be able to identify and evaluate the short-term and long-term accounting implications of business decisions.
- MSAs will be able to appraise situations faced by a business organization from a broad perspective that considers economic, legal, ethical, and social factors.
- MSAs will be able to integrate knowledge and concepts from different functional areas of business to analyze accounting decisions.

Transfer Credit
Students can transfer a maximum of 6 credits of elective coursework. 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.

iMS In Accounting

Contact
William J. Walsh, Director, Joseph I. Lubin School of Accounting, 616 Whitman School of Management, 315-443-3589, wiwalsh@syr.edu

Program Description
The iMS program is a limited residency distance learning version of the M.S. degree in accounting program. Students complete one week residencies on the Syracuse campus three times a year in early January, May, and August. Between residencies, coursework continues over the internet. This unique program allows students to complete the M.S. degree and the 150 hour CPA requirement while working in accounting or related fields.

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

The M.S. in Accounting degree meets the educational requirements for CPA licensure in New York state and most other 150 hour states.

Admission
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.

Participants in the 30-credit program must have a qualified undergraduate degree in accounting.

Financial Support
Students may apply for several loan programs to cover the cost of attendance. Federal Direct Loan, Program Federal PLUS Loans, Alternative Loan Programs Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

Degree Requirements
This is a 30 credit program leading to a Master of Science in Accounting degree. The rigorous Whitman IMS in Accounting program is designed for students with undergraduate degrees in accounting.

Total of 30 credits taken in following areas:
- ACC 725 - Financial Statement Analysis 3 credit(s)
- ACC 736 - Strategic Cost Analysis 3 credit(s)
- ACC 747 - Advanced Auditing 3 credit(s)
- ACC 757 - Taxes & Business Strategy 3 credit(s)

Accounting Elective (3 credits)
6 credits of business electives chosen from select courses

Three Electives (9 credits)

Transfer Credits
Students can transfer a maximum of 6 credits of elective coursework. 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.

Business Administration (iMBA), MBA

Contact
Amy McHale, Assistant Dean for Masters Program, Whitman School of Management Suite 315-443-9912, ammcchale@syr.edu

Program Description
The MBA@Syracuse is the Whitman School’s uniquely flexible M.B.A. program for working professionals. Syracuse University has offered an M.B.A. program via distance learning since 1977. As with the full-time M.B.A. program, the MBA@Syracuse is accredited by AACSB—the Association to Advance Collegiate Schools of Business. MBA@Syracuse features the same curriculum content as the full-time, on-campus MBA program, and graduates earn the same Syracuse University MBA diploma as on-campus students. The curriculum features a strong foundation in core business principles, and students may choose a specialization to focus their studies on an area relevant to their careers and personal interests. Students can take two courses (6 credits) each semester to complete the program in as little as two years. Students must complete 12
core courses and 5 electives, and attend three residencies (1 credit each) during the course of their program. Each semester is 12 weeks.

**Accreditation**

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

**Admission**

Applicants must have at least 1 year of work experience (post undergraduate degree) for this program. Applicants will be considered for the program based on their previous academic experience, work experience, professional references, and personal statements. The GMAT is not required for this program for students with at least 5 years (post undergraduate degree) professional work experience.

**Financial Support**

Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Program Federal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

**Degree Requirements**

This is a 54 credit program leading to a Master in Business Administration degree.

All 3 credits each

- ISM 615 - Microeconomics 3 credit(s)
- MBC 631 - Financial Accounting 3 credit(s)
- MBC 632 - Managerial Accounting 3 credit(s)
- MBC 633 - Managerial Finance 3 credit(s)
- MBC 635 - Operations and Supply Chain Management 3 credit(s)
- MBC 636 - Marketing Management 3 credit(s)
- MBC 638 - Data Analysis and Decision Making 3 credit(s)
- MBC 639 - Leadership in Organizations 3 credit(s)
- MBC 645 - Strategic Management 3 credit(s)
- MBC 647 - Global Entrepreneurial Management 3 credit(s)
- 15 credits of electives
- 3 credits of residencies

**Transfer Credit**

Students can transfer a maximum of 6 credits of elective coursework. 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. Students who have recently completed another graduate program at Syracuse University may apply up to 9 credits of elective coursework towards the degree.

**Satisfactory Progress**

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

**Business Administration, MBA**

**Contact**

Don Harter, Associate Dean for Master's Programs; 315 Whitman School of Management, 315-443-3502, dharter@syr.edu

**Program Description**

Students in the Whitman MBA program at Syracuse University receive a well-rounded education that incorporates both the theoretical background and practical experience needed to succeed in today's ever-changing global economy. The experiential learning component encourages students to apply classroom learning to business problems, connect with decision makers, and deliver tangible results that add value to sponsoring organizations. Students build an experiential portfolio through internships, consulting, specialized courses, community engagement, and other practical experiences that make them more valuable in the marketplace.

**Accreditation**

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

**Admission**

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.

**Financial Support**

Merit-based financial support is awarded based on a student’s admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Program Federal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

**Degree Requirements & Learning Objectives**

This is a 54 credit program that leads to a Master in Business Administration (MBA) degree.

**Core Courses and Credits**

- MBC 600 - Selected Topics 1-6 credit(s)
- 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 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 609 - Accounting for Managerial Decisions 1.5 credit(s)
- MBC 610 - Opportunity Recognition and Ideation 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)
- MBC 629 - Legal and Ethical Aspects of Management 1.5 credit(s)
- MBC 630 - Behavior in Organizations 1.5 credit(s)
- MBC 638 - Data Analysis and Decision Making 3 credit(s)
- MBC 647 - Global Entrepreneurial Management 3 credit(s)
- SCM 656 - Project Management 3 credit(s) or
experiential elective credits through at least two different experiences. These experiences include internships, consulting, specialized courses, community engagement and other practical experiences.

Accounting
The accounting department offers courses in the areas of accounting and management information systems.

Accounting
Chair -
Joe Comprim, Associate Professor, 611 Whitman School of Management, 315-443-3674, jjcompri@syr.edu

All organizations rely on accounting information to make decisions. Accounting courses emphasize the analysis of accounting information for strategic operating, financial, and tax decisions. In addition to foundation accounting courses, offerings include financial statement analysis, strategic cost analysis, and taxes and business strategy.

Career opportunities for individuals with accounting skills include professional accounting positions in audit, tax, information systems, and consulting, as well as corporate positions as controllers or financial analysts. The M.B.A. program is not designed for those who seek CPA licensure. M.B.A. students who seek CPA certification must carefully choose their electives, and normally will need to take additional courses to meet the educational requirements to be eligible to sit for the Uniform CPA examination.

Management Information Systems
Contact -
Michel Benaroch, Professor; 535 Whitman School of Management, 315-443-3492, mbenaroc@syr.edu

Today’s business environment requires M.B.A. graduates to have a thorough understanding of how traditional and e-business enterprises effectively deploy and use information technologies to enable business transformation and innovative competitive strategies, facilitate integration across business functions and supply chain networks, and enhance managerial decision making for business performance. The focus of the MIS curriculum is on helping students understand how organizations can develop and manage technological capabilities necessary for meeting current and future business needs. Our courses provide coverage of technologies, frameworks, methodologies, and tools related to advanced decision support and data mining, database management, project management, customer relationship management, and web-based system development, among others.

Courses in MIS provide M.B.A. students and students majoring in engineering management with the concepts, theories, and best practices needed for deploying and managing technology in rapidly changing business environments. Career opportunities for graduates include such positions as management consultant, technology manager, systems analyst, end-user computing specialist, business intelligence specialist, and other career-oriented managerial positions.

Entrepreneurship & Emerging Enterprises
Chair -
Alex McKelvie, Associate Professor; 508 Whitman School of Management, 315-443-7252, mckelvie@syr.edu

The EEE Program offers a unique M.B.A. concentration that combines themes that are critical for sustainable competitive advantage in any modern industry: entrepreneurial management, innovation, and global leadership. The entrepreneurial process is applied in a variety of organizational contexts. The courses in the concentration are designed to reflect a logical flow. Students first take a core course that establishes a strong entrepreneurial foundation, including what entrepreneurial management is, how to think about entrepreneurship, and the implications of entrepreneurial thinking and acting for a student’s approach to venture opportunities. This is followed by two elective EEE courses. The concentration ends with a capstone experience completed during the final semester, where students integrate all of their M.B.A. learning and apply it to the actual creation and implementation of an entrepreneurial concept.

The entrepreneurship concentration is intended as a comprehensive student experience. Accordingly, the program incorporates a number of pedagogical innovations and extracurricular initiatives. In addition to lectures, elective courses will expose students to presentations from entrepreneurs, participation in a novel creativity program, field consulting with existing small businesses, work in local business incubators, hands-on case studies, work with small businesses in completing an entrepreneurial audit, consulting to entrepreneurial family businesses, and the conceptualization and implementation of a new business idea together with a complete business plan and a pitch to a source of venture financing. Students are invited to enter business plans in the Panasci Business Plan Competition, an annual campus-wide competition with more than $50,000 in awards for winners, and other on-campus entrepreneurship competitions. Student initiated ventures can also operate in the Couri Entrepreneurial Hatchery. Each student in the program can be assigned to a successful entrepreneur, who will serve as a mentor. The D’Aniello Entrepreneurial Internship provides students with hands-on experience in an entrepreneurial venture.

Finance
The finance department offers courses in the areas of finance and real estate.

Finance
Chair -
Ravi Shukla, 629 Whitman School of Management, 315-443-3576, rshukla@syr.edu

The study and understanding of finance is an integral component of decision-making in all areas of business. Finance is a global, dynamic and exciting discipline. It offers a unique blend of theory and practical applications. Students studying finance should have excellent knowledge of economics and accounting, be able to use quantitative tools, and be willing to function in a world full of challenges and uncertainty. Thus they become members of a profession that can be both intellectually and professionally rewarding. Offerings include courses in financial management, investments, securities markets, international financial management, distress investing, portfolio management, real estate finance, fixed income securities, financial modeling, financial planning, and financial institutions.

The department is also responsible for the offering of statistics courses in the Whitman School. In today’s information age, knowledge of managerial statistics is useful in virtually every functional area of management. The concepts and tools of statistics are used to extract useful information from data to facilitate effective managerial decisions. For example, statistical techniques are used to design marketing studies, sample production units and customers, forecast business and economic conditions, formulate decision models that incorporate risk considerations, model the volatilities in stock returns, and monitor and control performance in a wide variety of managerial processes. The modern manager must be familiar with the assumptions underlying various statistical techniques and should be able to judge their appropriateness in a variety of situations. In addition, he or she should be able to perform selected analyses to voluminous data sets using available computer programs and interpret results in a valid and meaningful way. Courses in managerial statistics prepare students to be both producers and consumers of statistical analyses.

Real Estate
Contact -
Yildiray Yildirim, Professor, 120D Whitman School of Management, 315-443-4885, yildiray@syr.edu

The real estate track focuses on the development of a skill set and knowledge base to excel in the increasingly competitive landscape of the real estate industry. Curriculum and practical experiences are designed to help you learn to analyze and understand local tax laws, zoning regulations, school districts, contracts, utilities, transportation and much more. An understanding of real estate fundamentals and the capacity to put that knowledge to work in a changing commercial environment is an emphasis of the program. We prepare you to critically examine real estate financial information from diverse and conflicting sources.
Marketing graduates are prepared for broad and promising career options, including advertising and promotion management, business-to-business marketing, consulting, marketing management, marketing research, new product development, product and brand management, retailing and wholesaling, sales management, and managing a family business.

Supply Chain Management Concentration

All purposeful organizations transform various inputs to some form of output. This may involve the actual manufacturing process of a product or the delivery of a service. In supply chain management, students apply decision-making methods to the design, planning, and control of such transformation systems.

To design and plan the supply chain system, managers must understand aggregate forecasting, location analysis, physical layout, and maintenance policies. Running supply chain systems involves short-run forecasting, capacity planning, scheduling and control, inventory control, and quality and cost control. It is also critical that students understand the design of information systems, which relate all these areas to the activities of other units in the organization.

Since the problems studied in supply chain management are common to all organizations, career opportunities exist in varied public and private organizations including distribution, banking, transportation, health care, government, consulting, and in the more traditional retailing and manufacturing areas.

Learning Goal 1:

Our graduates will understand how to effectively manage organizational resources.

- Our students will be able to summarize key traits of different organizational resources, including financial capital, human capital, intellectual capital, technology resources, relational resources, and processes.
- Our students will be able to measure, organize and allocate resources in order to effectively meet organizational objectives.
- Our students will be able to evaluate, prioritize and plan the acquisition of resources that are aligned with organizational objectives.

Learning Goal 2:

Our graduates will be effective, persuasive communicators.

- Our students will be able to utilize effective strategies for communicating with and listening to other individuals and small groups.
- Our students will be able to develop, organize and generate clear and effective professional briefings and reports.
- Our students will be able to develop and support arguments that are both conceptually coherent and compellingly persuasive.

Learning Goal 3:

Our graduates will demonstrate skills in inquiry, critical thinking and problem solving, supported by appropriate analytical and quantitative techniques.

- Our students will be able to gather, manipulate, analyze and generate data for purposes of understanding business problems and design solutions for them.
- Our students will be able to apply industry standard tools and technologies to facilitate the problem solving process.
- Our students will be able to generate original and innovative solutions to new and existing business problems as well as justify the solutions.

Learning Goal 4:

Our graduates will demonstrate the ability to think strategically about business issues.

- Students will be able to identify and differentiate strategic issues from tactical ones.
- Students will be able to explain and apply concepts, models and tools of strategic analysis.
- Students will be able to identify and evaluate the short and long term implications of business decisions for an organization's stakeholders.
- Students will be able to articulate the business organization's perspective that considers economic and social factors.
- Students will be able to integrate knowledge and concepts from different functional areas of business in the course of analyzing and resolving strategic-level decision problems.

Learning Goal 5:

Our students will learn to function with an entrepreneurial spirit.

- Our students will be able to discover and evaluate business opportunities.
- Our students will be able to apply entrepreneurial thinking when acting within different facets and functional areas of business.
- Our students will be able to apply creativity and innovation processes to solve business problems.
- Our students will be able to recognize and assess risks surrounding innovative actions as well as generate approaches for mitigating and managing risks.
- Our students will be able to develop an original business idea and prepare a comprehensive business plan for its implementation.

Learning Goal 6:

Whitman MBAs will demonstrate the ability to manage in a global environment.

- Whitman MBAs will demonstrate awareness...
and understanding of world geography, languages and cultures.

- Whitman MBA's will be able to identify and explain cultural similarities and differences in societies across the globe.
- Whitman MBA's will be able to integrate opportunities and threats across the globe into their analysis of business situations.

Transfer Credit -

Students can transfer a maximum of 6 credits of elective coursework. 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.

Business Analytics Track

Program Description

The MBA Business Analytics track is a nine credit option within the MBA program. Students develop an interdisciplinary understanding of the applications of analytics to the fields of accounting, finance, marketing, and supply chain management through techniques in data collection, data visualization, statistical and pattern analysis, and data mining.

Admission

Admission to the residency or online MBA program, U.S. Bachelor's degree (or its equivalent) from an accredited college or university is required. Applicants are expected to score a minimum of 600 on the GMAT exam (60th percentile) or an equivalent percentile score on the GRE. International students are recommended to score 100 on the TOEFL with 23 on the speaking portion of the exam. A minimum of one year of professional work experience is preferred.

MBA track in Business Analytics Requirements

1. one required course in analytics core
2. one selective course in analytics applications core
3. one additional selective course in analytics applications or in analytics depth core

Learning outcomes:

1. Students will be able to collect and organize data
2. Students will identify patterns in data via visualization, statistical analysis, and data mining.
3. Students will develop alternative strategies based on the data.

Requirements

The business analytics track within the MBA program requires nine credits of analytics coursework:

- SCM 651 - Business Analytics 3 credit(s)
- Selective - Applied Analytics (select one of the following):
  - ACC 652 - Accounting Analytics 3 credit(s)
  - MAR 653 - Marketing Analytics 3 credit(s)
  - FIN 654 - Financial Analytics 3 credit(s)
  - SCM 702 - Principles of Management Science 3 credit(s)
- Selective - Analytics Depth (select one of the following or an additional Applied Analytics course):
  - MAS 766 - Linear Statistical Models I: Regression Models 3 credit(s)
  - MAS 777 - Time Series Modeling and Analysis 3 credit(s)
  - MAR 655 - Customer Relationship Management with Systems Applications and Products 3 credit(s)
  - IST 687 - Applied Data Science 3 credit(s)
  - IST 718 - Advanced Information Analytics 3 credit(s)
  - IST 777 - Statistical Methods in Information Science and Technology 3 credit(s)
  - IST 565 - Data Mining 3 credit(s)
  - IST 657 - Basics of Information Retrieval Systems 3 credit(s)
  - IST 679 - Information Visualization 3 credit(s)
  - IST 722 - Data Warehouse 3 credit(s)
  - IST 776 - Research Methods in Information Science and Technology 3 credit(s)
  - CSE 581 - Introduction to Database Management Systems 3 credit(s)
  - CSE 787 - Analytical Data Mining 3 credit(s)

Business Analytics MS

Contact

Don Harter, Associate Dean for Master’s Programs; 315 Whitman School of Management, 315-443-3502, dharter@syr.edu

Program Description

The MS in Business Analytics challenges students to develop an interdisciplinary understanding of the applications of analytics to the fields of accounting, finance, marketing, and supply chain management through techniques in data collection, data visualization, statistical and pattern analysis, and data mining. The curriculum leverages an understanding of business applications from the Whitman School of Management combined with in depth technical offerings of the School of Engineering and Computer Science and the School of Information Studies.

Accreditation

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

Admission

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.

Financial Support

Merit-based financial support is awarded based on a student’s admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, ProgramFederal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

Degree Requirements & Learning Objectives

This is a 36 credit program that leads to a Master of Science in Business Analytics degree. The MS Business Analytics curriculum is designed as a 36-credit program and normally requires two years or four academic semesters to complete on a full-time basis. It consists of four elements: 6 credits of required core courses; 6 credits of Analytics Applications courses; 6 credits of Analytics Depth or additional Analytics Applications courses; and 18 credits of Analytics electives. Students may select electives from other graduate programs in the University.

Required Core Courses and Credits (both courses required)

- ACC 652 - Accounting Analytics 3 credit(s)
- MAR 653 - Marketing Analytics 3 credit(s)
- FIN 654 - Financial Analytics 3 credit(s)
- SCM 702 - Principles of Management Science 3 credit(s)
- MAS 766 - Linear Statistical Models I:
Entrepreneurship &
Emerging Enterprises, MS

John M. Torrens, Assistant Professor of
Entrepreneurial Practice, 534 Whitman School of
Management, 315-443-3486, jtorrens@syr.edu

Program Description
The Master's in Entrepreneurship program provides a rigorous immersion into the nature of entrepreneurship and the entrepreneurial process. Core content is coupled with a strong commitment to experiential learning. It is targeted to students with a passion for entrepreneurship in for-profit, non-profit, and public sector contexts. It is a 30-credit program and can be completed in one year. Admission requirements include a bachelor's degree, GMAT or GRE scores, and a written proposal for a venture. Entrepreneurial or other work experience is preferred.

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

Admission
Students are required to take the GMAT or GRE as part of the application process. Applicants will be considered for the program based on their standardized testing score, previous academic experience, work experience, professional references, and personal statements.

Financial Support
Merit-based financial support is awarded based on a student's admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. Federal Direct Loan, Program, Federal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs. International students need to be enrolled for at least nine credits for student visa purposes.

Degree Requirements &
Learning Outcomes
This is a 30 credit program which leads to a Master of Science in Entrepreneurship degree.

Required Business Foundation (15
Credit Hours)
Number Course Title - All 1.5 Credits each except where noted
- EEE 620 - Foundations of Entrepreneurship 3 credit(s)
- MBC 603 - Creating Customer Value 1.5 credit(s)
- MBC 607 - Understanding Financial Statements 1.5 credit(s)
- MBC 609 - Accounting for Managerial Decisions 1.5 credit(s)
- MBC 610 - Opportunity Recognition and Ideation 1.5 credit(s)
- MBC 618 - Competitive 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)
- MBC 630 - Behavior in Organizations 1.5 credit(s)

Entrepreneurial Core - 4 Additional
Courses (12 Credit Hours)
Number Course Title - All 3 Credits each
- EEE 621 - Corporate Entrepreneurship 3 credit(s)
- EEE 625 - Venture Capital 3 credit(s)
- EEE 630 - Entrepreneurship in Engineering and Science 3 credit(s)
- EEE 640 - Social Entrepreneurship 3 credit(s)
- EEE 643 - Emerging Enterprise Consulting 3 credit(s)
- EEE 644 - Dilemmas and Debates in Entrepreneurship 3 credit(s)
- EEE 675 - Entrepreneurial Family Business Management 3 credit(s)
- EEE 676 - Advanced Topics in Family Business Management 3 credit(s)
- EEE 682 - Entrepreneurial Marketing 3 credit(s)
- MAR 757 - Managing Innovative Products and New Ventures 3 credit(s)
- MAR 761 - Marketing Strategies for Innovations 3 credit(s)
- LAW 814 - Technology Transactions Law 3 credit(s) * or
- LAW 815 - Technology Commercialization Research Center 3 credit(s) *

Required Entrepreneurship Field
Experience
Number Course Title
- EEE 670 - Experience Credit 1-6 credit(s)

Learning Goal 1:
Whitman MSEs will understand how to effectively manage organizational resources.
- MSEs will be able to summarize key traits of different organizational resources, including financial capital, human capital, intellectual capital, technology resources, relational resources, and processes.
- MSEs will be able to measure, organize and allocate resources in order to meet organizational objectives in an effective, ethical, and sustainable manner.
- MSEs will be able to evaluate, prioritize and plan the acquisition of resources that are aligned with organizational objectives.
- MSEs will be able to demonstrate an understanding of group and individual dynamics in organizations.

Learning Goal 2:
Whitman MSEs will demonstrate skills in inquiry, critical thinking, problem solving, and strategic analysis.
• MSEs will be able to gather, manipulate, and analyze data for purposes of understanding business problems and designing solutions for them.
• MSEs will be able to generate original and innovative solutions to new and existing business problems.
• MSEs will be able to explain and apply concepts, models and tools of strategic analysis.

Learning Goal 3:
Whitman MSEs will be able to explain the unique nature of entrepreneurship.
• MSEs will be able to discover and evaluate business opportunities.
• MSEs will be able to apply entrepreneurial thinking when acting within different facets and functional areas of business.
• MSEs will be able to apply creativity and innovation processes to solve business problems.
• MSEs will be able to recognize and assess risks associated with innovative actions as well as generate approaches for mitigating and managing risks.

Learning Goal 4:
Whitman MSEs will be able to explain the entrepreneurial process.
• MSEs will be able to apply principles of entrepreneurial marketing.
• MSEs will be able to construct bootstrap financing options.
• MSEs will be able to articulate processes for acquiring venture capital.
• MSEs will be able to develop a comprehensive business plan.

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

Finance, MS

Contact
Ton Barkley, Professor of Practice, 334 Whitman School of Management, 315-443-8107, tbarkley@syr.edu

Program Description
The MS in Finance challenges students to develop a thorough understanding of the global framework of finance and proceed to concentrate their efforts in selected areas of the discipline, such as corporate finance or investments. The preparation afforded to students desiring in-depth knowledge of finance must be commensurate with the increased complexity of the financial environment, as exemplified by greater opportunities and risks, larger array of products and financial management strategies, and greater degree of competition in the market for properly trained graduates. The Whitman School provides this knowledge through excellent and diverse year-round programs offered by an outstanding faculty.

The MS in Finance places emphasis on attracting highly qualified students from around the globe and building a challenging program with an excellent reputation. Upon completion of the program, graduates will have an understanding of the field of finance and the ability to use the appropriate theory and methodology to excel in today's global financial environment.

The Whitman MS in Finance can be completed with 30 credits (as little as one year) by students with academic backgrounds in finance, economics, accounting, and business. Students without academic backgrounds in these areas should expect to take up to an additional nine hours of foundation courses as part of the program. The MS in Finance program advisor reviews each student's academic background and designs a program personally suited for the student.

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

Admission
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.

Students entering the program should have appropriate background in accounting, economics, finance, and quantitative methods. If necessary, students will register for one or more of the available refresher courses.

Financial Support
Merit-based financial support is awarded based on a student's admission application. These awards are highly competitive and are available to both U.S. and international full-time students. Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, ProgramFederal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

Degree Requirements and Learning Objectives
The core of the program consists of 30 credit hours, of which 18 to 21 must be in finance. Students must take Corporate Financial Policy and Strategy, Investment Analysis, Financial Management, and three to four additional courses in finance. They are also required to take a course in either Regression Analysis or Time Series Analysis. The remaining courses may be taken in related areas (such as statistics, accounting, economics, real estate and international business). Available electives include International Financial Management, Emerging Markets, Fixed Income Securities, Derivatives, Distress Investing, Value Investing, and Securities Markets.

International Programs
In addition to the course work offered in Syracuse, students have the opportunity to participate in various international programs. The London Summer Program offers internships with prestigious international firms. The Shanghai Summer Program provides a unique view into the world of the important Asian markets.

Total Credits Required 30
Finance Courses 18-21 credits
Required (9 credits)
• FIN 751 - Corporate Financial Policy & Strategy 3 credit(s)
• FIN 756 - Investment Analysis 3 credit(s)
• FIN 855 - Financial Management 3 credit(s)

Total Credits Required 30
Finance Courses 18-21 credits
Required (9 credits)
• FIN 751 - Corporate Financial Policy & Strategy 3 credit(s)
• FIN 756 - Investment Analysis 3 credit(s)
• FIN 855 - Financial Management 3 credit(s)

Additional Finance (9-12 credits)
• FIN 600 - Selected Topics 1-6 credit(s)
• FIN 657 - International Financial Management 3 credit(s)
• FIN 660 - Fixed Income Securities 3 credit(s)
• FIN 666 - Value Investing 3 credit(s)
• FIN 673 - Control Investing 3 credit(s)
• FIN 761 - Financial Modeling 3 credit(s)

Courses from Related Fields 9-12 credits
• Regression and Time Series Analysis
• Accounting
• Economics
• International Business
• Real Estate

Learning Goal 1:
Our graduates will understand finance in the
context of global environment, businesses and securities.

- MSFs will be able to critically analyze the global financial and regulatory environments and implications of changes therein.
- MSFs will be able to assess the structure, conduct and performance of the financial sector, and the importance of key decisions made by investors and financial managers.
- MSFs will be able to employ appropriate methods in the valuation and use of securities such as stocks, bonds and derivatives.

**Learning Goal 2:**

Our graduates will achieve an in-depth knowledge in the major areas of finance: (i) corporate finance, (ii) investments and financial markets, and (iii) risk management and quantitative finance.

- MSFs will be able to analyze corporate financial policies and strategies, and understand the processes involved in valuation methods for project investments, initial public offerings, mergers and acquisitions, and divestitures.
- MSFs will be able to evaluate stand-alone investments as well as their treatment in the context of a well-diversified portfolio.
- MSFs will understand how global financial markets operate in terms of their dynamics and regulatory environment.
- MSFs will be able to appropriately employ methods and techniques in measuring, mitigating and managing risk.

**Learning Goal 3:**

Our graduates will be able to think critically in evaluating strategies and employing relevant tools.

- MSFs will be able to use up-to-date methods in the asset valuation, asset management, and corporate financial planning processes.

**Learning Goal 4:**

Our graduates will be proficient in quantitative analysis.

- MSFs will be able to understand the framework and applications of financial models.
- MSFs will be able to use software for financial modeling and applied statistics.

**Transfer Credit**

Students can transfer a maximum of 6 credits of elective coursework. 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.

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**New Media Management, MS**

**Contact:**
Stephen Masiclat, Director
255A Newhouse 3, 315-443-9243.

**Newhouse faculty:**
See faculty listings for the S.I. Newhouse School of Public Communications Faculty.

**Management faculty:**
See faculty listings under M.B.A. program in the Martin J. Whitman School of Management Faculty

**Program Requirements**

This program focuses on the management, finance, and marketing functions of the communications industry. The Master of Science degree in new media management is granted jointly by the S.I. Newhouse School of Public Communications and the Martin J. Whitman School of Management. The required number of graduate credits varies from 36 to 42, depending upon the student's prior academic background.

This 36-credit program leads to a Master of Science (M.S.) in New Media Management.

**Requirements of the Newhouse School of Public Communications**

**Required Courses**

- COM 698 - Media Law 3 credit(s) or
- TRF 637 - Telecommunications Law & Policy 3 credit(s)
- ICC 606 - Applied Research in Content Management 3 credit(s)
- ICC 617 - Issues in Media Management 3 credit(s)
- ICC 625 - New Media Business 3 credit(s)
- ICC 683 - Case Studies in Media Management 3 credit(s) or
- TRF 683 - Communications Industry Frontiers 3 credit(s)

**Capstone**

- ICC 689 - New Media Management Capstone 6 credit(s)

**Requirements of the Martin J. Whitman School of Management**

**Required Courses**

- EEE 643 - Emerging Enterprise Consulting 3 credit(s) or
- MAR 745 - Strategic Brand Management 3 credit(s)
- MBC 603 - Creating Customer Value 1.5 credit(s)
- MBC 604 - Managing the Marketing Mix 1.5 credit(s)
- MBC 607 - Understanding Financial Statements 1.5 credit(s)
- MBC 609 - Accounting for Managerial Decisions 1.5 credit(s)
- MBC 618 - Competitive Strategy 1.5 credit(s)
- MBC 619 - Corporate Strategy 1.5 credit(s)
- MBC 639 - Leadership in Organizations 3 credit(s)

**Additional Information**

Students without prior background in communications must complete an additional 6 credits in Newhouse course-work chosen in conjunction with the program director.

Total: 36-42 credits

**Professional Accounting, MS**

**Contact**
William J. Walsh, Director, Joseph I. Lubin School of Accounting, 616 Whitman School of Management, 315-443-3589, wiwalsh@syr.edu

**Program Description**

Accounting@Syracuse is a distance learning version of the M.S. degree in accounting program. This unique program allows students to complete the M.S. degree and the 150 hour CPA requirement while working in accounting or related fields.

**Accreditation**

The Whitman School has been accredited by the Association to Advance Collegiate Schools of Business (AACSB International) since 1920. The M.S. in Accounting degree meets the educational requirements for CPA licensure in New York state and most other 150 hour states.

**Admission**

Applicants will be considered for the program based on their GMAT score, previous academic experience, work experience, professional references, and personal statements. The GMAT is not required for this program for students with at least 5 years (post undergraduate degree) professional work experience.
Participants in the 30-credit program must have a qualified undergraduate degree in accounting.

**Financial Support**

Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, ProgramFederal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

This is a 30 credit program leading to a Master of Science in Accounting degree. The rigorous Whitman Accounting@Syracuse program is designed for students with undergraduate degrees in accounting.

Total of 30 credits taken in following areas:

- ACC 677 - International Reporting and Analysis 3 credit(s)
- ACC 725 - Financial Statement Analysis 3 credit(s)
- ACC 747 - Advanced Auditing 3 credit(s)
- ACC 757 - Taxes & Business Strategy 3 credit(s)
- Accounting Elective (3 credits)
- 6 credits of business electives chosen from select courses
- Three Electives (9 credits)
- Transfer Credits

Students can transfer a maximum of 6 credits of elective coursework. 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.

**Supply Chain Management, MS**

**Contact**

Prof. Fred F. Easton, MS-SCM Program Director, 517 Whitman School of Management, ffeaston@syr.edu

Department Office Contact: 315-443-1383

**Program Description**

Supply chain management is an interdisciplinary field that emphasizes cross-functional links and seeks to manage those links to enhance a company’s competitive advantage. It involves forecasting, resource allocation, production planning, flow and process management, inventory management, customer delivery, after-sales support and service, as well as a host of other activities and processes familiar and basic to business. Competitive pressures are intense. Sophisticated techniques have been devised to expedite information flow, including on-board computers for trucks and ships, satellite tracking systems, and the electronic transmission of order and shipping information.

An understanding of supply chain management is an asset to any manager, and there is a strong demand for specialists in the area. Managers attracted to SCM enjoy the variety and challenges in the field, its sophisticated technology, and its importance to the overall economy and the global marketplace. Entrants to the field look forward to an entrepreneurial environment and opportunities to deal with a wide array of people from a variety of organizations. SCM managers also like a hands-on approach. They use sophisticated decision tools, yet they can always envision the underlying physical processes-processes that are familiar enough to be taken for granted, yet subject to managerial initiative and rapid change.

Syracuse University offered the first supply chain program in the country in 1919. Today, supply chain management programs are offered at the undergraduate, masters, and doctoral level; including an MS in SCM offered through a distance learning format. Coursework is completed online and independently with three residencies per year on the Syracuse University campus. Distance learning courses have been offered through the IMBA program since 1977.

**Accreditation**

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

**Admission**

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.

**Financial Support**

Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, ProgramFederal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

**Degree Requirements & Learning Objectives**

This is a 30 credit degree program leading to a Master of Science in Supply Chain Management.

With an emphasis on managing risk in today’s global supply chains, this 30 credit-hour program consists of the Management Foundation, the Supply Chain Management core, one of several integrative Supply Chain Management “selective” courses, and a culminating experience. Upon satisfactory completion of all coursework and the culminating experience, students are awarded a Master of Science in Supply Chain Management degree from the Whitman School of Management and Syracuse University.

**Management Foundation** (9 credit hours)

- MBC 631 - Financial Accounting 3 credit(s) (or equivalent; MBC 607 & MBC 608)
- MBC 633 - Managerial Finance 3 credit(s) (or equivalent; MBC 627 & MBC 628)
- MBC 636 - Marketing Management 3 credit(s) (or equivalent; MBC 603 & MBC 604)

**Supply Chain Core** (15 credit hours, required)

- MBC 635 - Operations and Supply Chain Management 3 credit(s) (or equivalent; MBC 616 & MBC 617)
- MBC 638 - Data Analysis and Decision Making 3 credit(s)
- SCM 701 - Supply Chain and Logistics Management 3 credit(s)
- SCM 702 - Principles of Management Science 3 credit(s)
- SCM 741 - Strategic Sourcing 3 credit(s)

**Selectives** -- choose 1 course (3 credit hour minimum).
Our graduates will demonstrate skills in inquiry, problem solving, supported by appropriate analytical and quantitative techniques.

Learning Goal 2:
Our graduates will understand how to effectively manage organizational resources.

Learning Goal 3:
Our graduates will demonstrate the ability to think strategically about business issues.

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

Business Administration, PhD

Contact
Michel Benaroch, Associate Dean for Research and Ph.D. Programs, Whitman School of Management, 721 University Avenue, 315-443-3429, mbunaroc@syr.edu

Program Description
The program of study leading to the doctor of philosophy degree in business administration prepares outstanding candidates for academic research careers in higher education. With a strong emphasis on research, the program stresses academic competence and preparation for a scholarly career in one of the fields of business administration such as accounting, finance, marketing, entrepreneurship, management, management information systems, managerial statistics, and supply chain management. A supporting field in another discipline or interdisciplinary area within the Whitman School of Management or elsewhere in the University is required.

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

Admission
It is normally expected that applicants will hold an appropriate master's degree from an accredited institution, although outstanding students will be considered with a baccalaureate degree.

Applicants must:
- Obtain recommendations from at least three professors thoroughly familiar with their previous academic performance and qualified to evaluate their ability to do doctoral work;
- Achieve a strong score on the Graduate Management Admissions Test (GMAT), administered nationally by the Educational Testing Service of Princeton, New Jersey. (Can be substituted by a GRE score)
- Present a previous academic record of superior quality and meet the Syracuse University Graduate School requirements for matriculation.

Financial Support
The Ph.D. is a full-time program in which students are engaged in full-time graduate study, research, and teaching. Financial support is provided for most students through a Teaching Assistant (TA) position for four years, which includes a stipend and a full-tuition scholarship of up to 24 credits per academic year, subject to satisfactory performance.

Degree Requirements
Individual programs of doctoral candidates vary according to their objectives, special interests, background, and previous formal educational preparation. Each student's program must be approved by the candidate's advisor.

Depending upon a candidate's training and experience, a minimum of 72 credit hours beyond the baccalaureate degree are required leading to the doctor of philosophy degree. Students are also expected to complete before the start of their second year a summer research paper under a faculty mentor. The coursework includes a dissertation that demonstrates ability to do original scholarly research. An oral defense of the dissertation is required. In addition, students are exposed to teaching-related experience during their program prior to degree completion.

Additional Information
Information can be found on the Internet at whitman.syr.edu/phd

Accounting, JD/MBA
Degree Requirements
Business and industry must take public and private law into account in all decisions. The College of Law and the Martin J. Whitman School of Management have responded by creating joint degree programs in business administration and accounting. Students may obtain a J.D. and M.B.A. or J.D./M.B.A. in accounting or finance in four years instead of the five years necessary when both programs are pursued separately. These programs are particularly appropriate for students with career objectives in corporate law, tax law, or labor law. J.D./M.B.A. students generally complete program requirements in four academic years. Program structure for the J.D./M.B.A. in accounting or finance varies substantially depending on the student's accounting and management background and desire for certification. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

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:
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/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, mcmarece@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:
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.

Bioengineering/Business Administration, 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, mcmarece@syr.edu

Students will complete 130 credits for the Bachelor of Science in Bioengineering degree and an additional 54 credits for the MBA degree.
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 & 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.

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.

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.

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 & 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.
credits for the 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:
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 coursework, 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, mmcmarce@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:
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 coursework, 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, mmcmarce@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:
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 coursework, 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, mmcmarce@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.
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 (12 credits)
- MBC 601 - Economic Foundations of Business 1.5 credit(s)
- MBC 602 - Economics for International Business 1.5 credit(s)
- MBC 604 - 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)
- PAI Elective Choice 3 credit(s) (Winter)
- ACC 760 - Principles of Fraud Examination 3 credit(s)
- BUA 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)

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)
- MBC 647 - Global Entrepreneurial Management 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.

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:
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.

3+2 Program Requirements:
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 coursework, 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.

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.

Finance, JD/MBA
Degree Requirements
Business and industry must take public and private law into account in all decisions. The College of Law and the Martin J. Whitman School of Management have responded by creating joint degree programs in business administration and accounting. Students may obtain a J.D. and M.B.A. or J.D. M.B.A. in accounting or finance in four years instead of the five years necessary when both programs are pursued separately. These programs are particularly appropriate for students with career objectives in corporate law, tax law, or labor law. J.D./M.B.A. students generally complete program requirements in four academic years. Program structure for the J.D./M.B.A. in accounting or finance varies substantially depending on the student’s accounting and management background and desire for certification. Because a joint degree program involves reciprocal application of electives, students are not awarded either degree until the requirements for both degrees are completed.

Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbotth@law.syr.edu).

Mechanical Engineering/ Business Administration (3-2 Program), BS/MBA

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.

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

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:
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

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, mcmance@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:
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

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, mcmance@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.
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.

Sustainable Enterprise (CASSE), CAS

Contact
Todd Moss, Faculty Director Sustainable Enterprise Partnership, 540 Whitman School of Management, 315-443-9215, tmoss@syr.edu

Program Description
The Certificate of Advanced Study in Sustainable Enterprise (CASSE) is offered collaboratively by the Whitman School of Management, the College of Engineering and Computer Science, the State University of New York College of Environmental Science and Forestry, and the Syracuse Center of Excellence in Environmental and Energy Systems. The CASSE integrates business, science, engineering, policy, and practice, taking a transdisciplinary approach to sustainable enterprise.

Students who complete the certificate will be fluent in the economic, environmental, and social dimensions of sustainability and their interdependence; systems science and its relationship to sustainability; and the natural, financial, technical, legal, and social drivers of sustainability strategy in businesses and other organizations. They will be prepared to engage in transdisciplinary collaboration to develop sustainable solutions to complex organizational challenges.

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

Financial Support
Students may apply for several loan programs to cover the cost of attendance. (Federal Direct Loan, Federal PLUS Loans, Alternative Loan Programs) Part-time students must be enrolled for at least six credits (half-time status) to be considered for loan programs.

Additionally, there are partial scholarships available for students who need to take additional courses above and beyond their graduate degree program to complete the CASSE program.

Admission
Students must be matriculated into a graduate program at Syracuse University or SUNY ESF to be considered for admission to the program.

Certificate Requirements
Students must complete 15 credits for the certificate.

- BUA 650 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s) or
- ECS 650 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s) or
- EST 696 - Managing Sustainability: Purpose, Principles, and Practice 3 credit(s)
- BUA 651 - Strategic Management and the Natural Environment 3 credit(s) or
- ECS 651 - Strategic Management and the Natural Environment 3 credit(s)
- BUA 759 - Sustainability-Driven Enterprise 3 credit(s) or
- ECS 759 - Sustainability-Driven Enterprise 3 credit(s) or
- EST 796 - Sustainability-Driven Enterprise 3 credit(s)

6 credits of electives
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 University, 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

Yildiray Yildirim, Associate Professor of Finance, Director of Kuhn Real Estate Center
Ph.D., Cornell University

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
Martin J. Whitman School of Management

Courses

Accounting

**ACC 601 - Intermediate Financial Accounting I**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Double Numbered with: ACC 356
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: MBC 632 OR MBC 609

**ACC 602 - Intermediate Financial Accounting II**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Double Numbered with: ACC 357
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 601

**ACC 610 - Activity Based Costing and Management**
*Martin J. Whitman School of Management*
1.5 credit(s) At least 1x fall or spring
Comparison of the traditional absorption costing systems and the emerging activity-based costing systems with respect to their usefulness for managerial decisions
PREREQ: MBC 609

**ACC 621 - Cost Analysis & Control**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Double Numbered with: ACC 363
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: MBC 609 OR MBC 632

**ACC 652 - Accounting Analytics**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Accounting analytics including Benford's Law, current and prior period data, anomaly detection, correlation and time series detection, risk assessment and risk scoring, and purchasing card transaction fraud.

**ACC 677 - International Reporting and Analysis**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
Crosslisted with: INB 677
The implications of differences in international financial reporting practices for financial analysis and decision making. Foreign currency translation, mergers and acquisitions, transfer pricing, taxation, derivatives, and risk management.
PREREQ: ACC 602 OR ACC 357

**ACC 685 - Principles of Taxation**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Double Numbered with: ACC 385
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: MBC 609 OR MBC 632

**ACC 725 - Financial Statement Analysis**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
The role of financial statement information in assessing a firm's performance, prospects, and value. Financial analysis, equity valuation, competitive analysis, merger and acquisition analysis, international financial statement analysis.
PREREQ: ACC 602 OR ACC 357

**ACC 726 - Auditing Theory/Practice**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Double Numbered with: ACC 476
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 602 OR ACC 357

**ACC 736 - Strategic Cost Analysis**
*Martin J. Whitman School of Management*
3 credit(s) Irregularly
Contemporary cost accounting systems in relation to strategic decisions and control of various economic organizations. Emphasizing activity-based costing, activity-based management, and integrated cost systems.
PREREQ: ACC 621 OR ACC 363

**ACC 744 - History of Regulation of Trade and Business**
*Martin J. Whitman School of Management*
2-3 credit(s) At least 1x fall or spring
This course explores the legal and moral principles of business and trade regulation over 5,000 years, including: ancient regulation of prices, usury laws, licensing, and other concepts as they evolved into our current system.

**ACC 747 - Advanced Auditing**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
Seminar discussion of advanced auditing research and cases. Topics include the market for assurance services, auditor decision making, audit risk, and information systems auditing.
PREREQ: ACC 726

**ACC 756 - Advanced Financial Accounting**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Double Numbered with: ACC 477
Accounting and reporting for business combinations, foreign currency transactions, derivatives, and governmental entities. Extra work required of graduate students.
PREREQ: ACC 602 OR ACC 357

**ACC 757 - Taxes & Business Strategy**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
Incorporating tax costs and benefits into business planning and decision-making. Highlights the problems of entrepreneurs, transfers of businesses, financial reporting affects, business lifecycle and entity choice, and international operations.
PREREQ: ACC 685 OR ACC 385

**ACC 760 - Principles of Fraud Examination**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
Nature of occupational fraud and abuse in organizations. How and why occupational fraud is committed, detected and deterred; how to proceed if fraud is suspected. Emphasis on asset misappropriation schemes, corruption, and financial statement fraud. Additional work required of graduate students.

PREREQ: ACC 621

ACC 775 - International Tax Planning and Research
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Issues concerning the taxation of international transactions; various complex issues in partnership and corporate tax planning; issues with joint ventures and consolidated returns filed in the U.S. Permission of instructor required if prerequisite not met.

PREREQ: ACC 757

ACC 777 - Taxation of Business Entities
Martin J. Whitman School of Management
3 credit(s) Irregularly
Double Numbered with: ACC 481
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 685 OR ACC 385

ACC 786 - Fin Sys Analy/Social Inst
Martin J. Whitman School of Management
3 credit(s) Upon sufficient interest
Role of financial management systems in nonprofit organizations such as hospitals, education, government and social programs. System cost analysis, budgeting analysis, impact of people on budgets, cost effectiveness analysis, and developing social accounting systems.

PREREQ: ACC 601 OR ACC 356

ACC 855 - Sem/Acc/Thry:Current Devp
Martin J. Whitman School of Management
3 credit(s) Irregularly

ACC 860 - Research in Accounting
Martin J. Whitman School of Management
3 credit(s) Irregularly
Directed readings and individual research into controversial and special areas of accounting. Papers presented on selected topics.

Repeatable 1 time(s), 6 credits maximum

ACC 960 - Doctoral Seminar
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Repeatable

Business Administration

BUA 600 - 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 650 - Managing Sustainability: Purpose, Principles, and Practice
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: ECS 650
Dynamics and interdependence of economic, social, and environmental systems. Sustainable management frameworks, tools, and metrics. Local, national, and international implications. Relevance of technology, ethics, law, and policy. Interdisciplinary emphasis.

BUA 651 - Strategic Management and the Natural Environment
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: ECS 651
Sustainability from firm perspective. Regulatory, international, resource, market, and social drivers of environmental strategy. Impact of sustainability-related strategies on competitive advantage and potential liability.

PREREQ: BUA 650 OR ECS 650

BUA 670 - Experience Credit
Martin J. Whitman School of Management
1-6 credit(s) Every semester
Participation in a discipline- or subject-related experience. Evaluation by written or oral reports or an examination. Prereq: permission of the department, assigned instructor, and dean. Limited to those in good academic standing.

Repeatable

BUA 690 - Independent Study
Martin J. Whitman School of Management
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 or instructors and the department.

Repeatable

BUA 759 - Sustainability-Driven Enterprise
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: ECS 759
CAS in Sustainable Enterprise capstone. Sustainable approaches to complex organizational challenges, opportunities: organizational, industry, stakeholder analysis, sustainability objectives, strategies, and metrics. Multidisciplinary team consulting project.

PREREQ: (BUA 650 OR ECS 650) AND (BUA 651 OR ECS 651)

BUA 786 - Sem/Army Comptrollership
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Courses in individual subject areas are integrated and related to the total resource and general management problems of the Army. Management job of the commander at various levels in the Army organization. Policy making and administration from an overall management point of view with respect to each organization under study. Methods whereby the comptroller, as a member of the staff, can and should assist the commander in the solution of command problems.

BUA 787 - Sem/Army Comptrollership
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Courses in individual subject areas are integrated and related to the total resource and general management problems of the Army. Management job of the commander at various levels in the Army organization. Policy making and administration from an overall management point of view with respect to each organization under study. Methods whereby the comptroller, as a member of the staff, can and should assist the commander in the solution of command problems.

BUA 897 - Resrch Methods & Projects
Martin J. Whitman School of Management
3 credit(s) Every semester
Research project in any selected area; may be area of concentration. Results of research are prepared and presented under supervision of the faculty advisor.

BUA 960 - Survey of Research Methods in Business
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Quantitative business research techniques for surveys, experiments and archival data analysis including model building, cross sectional and longitudinal models, simultaneous equations, choice models, structural equation modeling, hierarchical linear models, ANOVA, conjoint
Entrepreneurship and Emerging Enterprises

EE 620 - Foundations of Entrepreneurship
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
The process of entrepreneurship in start-up and established corporate environments. Approaches entrepreneurship as both attitudinal and behavioral, with applicability in a variety of contexts. Global dimensions of entrepreneurship are investigated as they relate to the independent and corporate entrepreneur. Cannot be repeated for credit. Must be admitted to a graduate program at SU.

EE 621 - Corporate Entrepreneurship
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: EEE 420
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.

EE 625 - Venture Capital
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Financing issues as they relate to entrepreneurial ventures. The financial needs and financing strategies of growth-oriented ventures are highlighted. Stages of entrepreneurial finance are investigated. The roles of valuation, deal structures and negotiation tactics are explored.

EE 630 - Entrepreneurship in Engineering and Science
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
The intersection of engineering and entrepreneurship, focusing on the commercialization of new technologies into start-up ventures. Types of technologies, technology life cycles, windows of opportunity, the market chasm, and intellectual property as these issues apply to venture creation by those with technical backgrounds.

EE 640 - Social Entrepreneurship
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Examination of the opportunities and challenges associated with using entrepreneurial solutions to address social problems. Course integrates management, evaluation, and analytical techniques to support the launch, operation, and expansion of social purpose organizations.

EE 643 - Emerging Enterprise Consulting
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Students work in consulting teams to assist small local firms and entrepreneurs. Problems are isolated and solutions are then developed and implemented. A team consultant's report is then prepared.

EE 644 - Dilemmas and Debates in Entrepreneurship
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: EEE 444
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.

EE 652 - International Entrepreneurship
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: INB 652
Double Numbered with: EEE 452
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.

EE 664 - Entrepreneurial Empowerment
Martin J. Whitman School of Management
3 credit(s) Only during the summer
Double Numbered with: EEE 464
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.

EE 670 - Experience Credit
Martin J. Whitman School of Management
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. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.

EE 675 - Entrepreneurial Family Business Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: EEE 375
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. Additional work required of graduate students.

EE 676 - Advanced Topics in Family Business Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: EEE 476
Covers advanced topics in family business management, such as taxation, establishment of trusts and estates, legal transfer of ownership, legal forms and valuation. Additional work required of graduate students.

EE 682 - Entrepreneurial Marketing
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: EEE 382
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.

PREREQ: MBC 636

EE 900 - 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.

EE 930 - Theoretical Foundations of Entrepreneurship
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
History, direction, and substance of developments in the field of entrepreneurship. Advanced topics related to theoretical foundations and the advancement of research within the field. Admission to doctoral program in the School of
Finance

FIN 600 - 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 607 - Bank Management
Martin J. Whitman School of Management
1.5 credit(s) At least 1x fall or spring
This course will describe how a bank operates and the unique set of financial statements and terms that are specific to the banking industry.

FIN 643 - Real Estate Capital Markets
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted 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 751 OR FIN 756

FIN 652 - Working Capital Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: FIN 452
Introduction to corporate financial decision-making related to daily operations, including balanced scorecard use, financial forecasting, management of current assets and liabilities, international issues, and use of information technology. Case studies are emphasized. Additional work required of graduate students.

FIN 653 - New and Emerging Markets
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: INB 653

FIN 654 - Financial Analytics
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
An introduction to methods and tools useful in decision-making in the financial industry, including: macroeconomic event studies, analysis of term structures, Morningstar equity data, style analysis, credit card receivables, trading analytics, execution algorithms, etc.

FIN 657 - International Financial Management
Martin J. Whitman School of Management
3 credit(s) Irregularly
Crosslisted with: INB 657
Major financial decisions of international firms in context of special risks and opportunities. Foreign direct investment theory.
PREREQ: MBC 633

FIN 659 - Introduction to Derivatives
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: FIN 459
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: MBC 633

FIN 660 - Fixed Income Securities
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Pricing, market structure, hedging, trading strategies for fixed income derivative securities like swaps, swaptions, caplets, floorlets, and credit risk derivative instruments.

FIN 664 - Institutional Trading
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: FIN 464
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 666 - Value Investing
Martin J. Whitman School of Management
3 credit(s) Every semester
Double Numbered with: FIN 466
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: MBC 633

FIN 668 - Seminar in Finance
Martin J. Whitman School of Management
3 credit(s) Irregularly
Double Numbered with: FIN 468
Specialized work for advanced students on particular phase or topic in finance. Reading, reports, and thesis.
PREREQ: MBC 633, ECN 601

FIN 669 - Distress Investing
Martin J. Whitman School of Management
3 credit(s) Only during the summer
Double Numbered with: FIN 469
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.

FIN 672 - 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 672
Double Numbered with: FIN 472
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 673 - Control Investing
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: FIN 473
What control investors do and how they do it: friendly and hostile takeovers, leveraged buyouts and other contests for control are covered.
PREREQ: FIN 666
FIN 741 - Risk Management: Credit Risk  
Martin J. Whitman School of Management  
1.5 credit(s) Irregularly  
Quantitative models dealing with default risk. Credit risk models, credit derivative markets, credit default swaps and linked notes, credit spread options, basket default swaps.  
PREREQ: MBC 633 AND MBC 638

FIN 742 - Risk Management: Operational Risk  
Martin J. Whitman School of Management  
1.5 credit(s) Irregularly  
Evaluation and management of operational risk in a banking/financial institution environment. Regulatory risk and capital requirements. Theoretical and practical aspects of operational risk models.  
PREREQ: MBC 627, MBC 628, MBC 631, AND MBC 638

FIN 751 - Corporate Financial Policy & Strategy  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Advanced issues in corporate investment decisions, dividend and debt policy, corporate restructuring, risk management, and corporate governance.  
PREREQ: Ecn 604, MBC 633, AND MBC 638

FIN 755 - Applied Financial Management  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Selected applications of financial analysis and theory to firm problems. Topics vary as financial environment changes. Mergers, acquisitions, ESOP, leveraged leasing, etc. Seminar method, written and oral reports, case analyses.  
PREREQ: MBC 633

FIN 756 - Investment Analysis  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
For students desiring preparation for professional investment work. Detailed analysis of individual securities and application of analytical methods to portfolio management.  
PREREQ: MBC 633, MBC 638

FIN 758 - Portfolio Analysis and Theory  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Practical as well as theoretical problems of modern portfolio selection techniques and analysis. Independent, empirical work by the student and important macro implications of portfolio selection.  
PREREQ: FIN 756, MAS 766/ISM 743

FIN 761 - 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 751 OR FIN 756

FIN 827 - Corporate Financing Transactions  
Martin J. Whitman School of Management  
1.5-2 credit(s) At least 1x fall or spring  
This course combines diverse aspects of business and law education in a transaction-based setting. It guides students through a syndicated commercial loan, including the structuring, negotiation, pricing, and documentation.  
PREREQ: FIN 751, MAS 766

FIN 855 - Financial Management  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Theory of financial decision making, consumption and investment decisions. Selected problems of application of corporate policy including capital budgeting under uncertainty, leasing, corporate growth, mergers, liquidation, and reorganization. Theoretical and empirical aspects of valuation.  
PREREQ: FIN 751, MAS 766

FIN 856 - Analytical Methods/Managerial Research  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Selected topics in mathematical programming simulation, the general linear model, and numerical taxonomy as applied to research in the field of management. Individual research projects developed by the student. Can be taken more than once depending on the student's interest and permission of the instructor. Knowledge of FORTRAN IV or PL/1 is assumed.  
PREREQ: FIN 751, MAS 766

FIN 960 - Grad Seminar in Finance  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Readings, discussions, and reports for doctoral candidates. Repeatable

FIN 760 - International Business  
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

INB 652 - International Entrepreneurship  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Double Numbered with: INB 452  
Crosslisted with: EEE 652

INB 653 - New and Emerging Markets  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  

INB 657 - International Financial Management  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Crosslisted with: FIN 657

INB 658 - International Financial Analysis  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Double Numbered with: INB 458  
Crosslisted with: FIN 458

INB 659 - The Law of Global Business  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
The legal environment of international business: the framework of international law and organizations influencing the transactions of international business. Topics include the
Range of environmental problems from a legal and public policy viewpoint: air, water, and toxics pollution; solid and hazardous waste; and environmental planning.

**LPP 759 - The Law of Global Business**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
Crosslisted with: INB 769
The legal environment of international business: the framework of international law and organizations influencing the transactions of international business. Topics include the international law, international contracts, customs, and world trade law.
PREREQ: LPP 255 AND SCM 265

**LPP 765 - Social Influences On Business**
*Martin J. Whitman School of Management*
3 credit(s) Irregularly
Various environmental factors that control and enhance the conduct of business. Nature, function, impact, and development of such factors. Matters of current interest.

**LPP 766 - Seminar in Business-Government Relations**
*Martin J. Whitman School of Management*
3 credit(s) Irregularly

**LPP 767 - Management and Ethics**
*Martin J. Whitman School of Management*
3 credit(s) Irregularly
Double Numbered with: LPP 467
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.

**Marketing Management**

**MAR 653 - Marketing Analytics**
*Martin J. Whitman School of Management*
3 credit(s) Every semester
Marketing analytics techniques including discriminant analysis, logit, cluster analysis, factor analysis, and conjoint analysis. Marketing decision support models such as new product diffusion, test market, price and sales promotion decision models.

**MAR 655 - Customer Relationship Management with Systems Applications and Products**
*Martin J. Whitman School of Management*
3 credit(s)
Crosslisted with: MIS 655, SCM 665
Integration of marketing, supply-chain and technology management aspects of customer relationship management. Operational, analytical and collaborative processes supported by SAP's integrated software. Actual use of SAP software, including Business Data Warehouse, with best-practice processes.

**MAR 721 - Marketing and the Internet**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
The course focuses on how traditional marketing approaches have to be modified to take advantage of the reach and capabilities of the internet, from understanding customer needs to after sales customer services.
PREREQ: (MBC 603 AND MBC 604) OR MBC 636

**MAR 741 - Marketing Community and Public Service Agencies**
*Martin J. Whitman School of Management*
3 credit(s) Irregularly
Design, implementation, and control of marketing programs for community and public service agencies: performing arts, health care, urban planning, police, educational, scientific, and technical organizations.

**MAR 745 - Strategic Brand Management**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
Concepts and tools acquired from various marketing courses to develop analytical and decision-making skills for planning and implementing a marketing strategy from the brand manager's point of view.
PREREQ: MBC 604 OR MBC 636

**MAR 751 - Environmental Influences on Innovation**
*Martin J. Whitman School of Management*
3 credit(s) Irregularly
Major environmental forces that shape innovation policy from a technology, market, international, economic, social, and political-legal perspective. Managerial response to environmental forces.
PREREQ: MBC 636

**MAR 752 - Introduction to Innovation Management**
*Martin J. Whitman School of Management*
3 credit(s) At least 1x fall or spring
The process of converting ideas, technology, and
customer needs into new products, services, and processes. Environmental and organizational influences on the innovation process.

PREREQ: MBC 636

MAR 753 - Marketing Channel Management
Martin J. Whitman School of Management
3 credit(s) Irregularly
Marketing channels as both economic and social systems. Channel change and evolution, channel membership, structural and functional relationships, interorganizational behavior, and channel information management.

PREREQ: MBC 636

MAR 754 - Seminar in Marketing Research
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Collection, analysis, and interpretation of data. Problem definition, questionnaire design, attitude measurement, data analysis, and demand forecasting. For those interested in conducting marketing research or using research information for marketing decision making.

PREREQ: MBC 636, MBC 638

MAR 755 - Marketing Communications Strategy
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Managerial aspects. Determination of promotional budgets, planning and building promotional effectiveness, scheduling and monitoring promotional impact.

PREREQ: MBC 636

MAR 756 - Market Measurement and Analysis
Martin J. Whitman School of Management
3 credit(s) Irregularly
Application of analytical and quantitative techniques to market measurement. Product-market strategy.

PREREQ: MBC 636 AND MBC 638

MAR 757 - Managing Innovative Products and New Ventures
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Problems in developing new products and new corporate ventures. Designing innovation strategies, risk taking, technology planning, evaluation of new product proposals, and managing the innovation team.

PREREQ: MBC 636

MAR 759 - Seminar in Marketing
Martin J. Whitman School of Management
3 credit(s) Irregularly
Survey of statistics for managerial decision making. Applications and problem identification. Descriptive statistics, probability, sampling, estimation, hypothesis testing, time-series analysis, simple and multiple regression, and statistical decision theory.

PREREQ: MBC 638 OR MAS 653

MAR 761 - Marketing Strategies for Innovations
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Commercializing new products, services, and technologies. Introduction and diffusion of innovations, market planning, product strategy design, and marketing decision making.

PREREQ: MBC 636

MAR 777 - Global Supply Chain Strategy
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: SCM 777

Topics include: design of global facility networks, containerization and logistical planning across borders, benefits and risks of outsourcing and offshoring while integrating financial and accounting-related matters such as exchange rates, duties, drawbacks and tax differentials.

PREREQ: MBC 616, MBC 638

MAR 900 - Seminar in Marketing Theory
Martin J. Whitman School of Management
3 credit(s) Irregularly
Current marketing theory as developed by contemporary writers.

PREREQ: MBC 636

Repeatable

MAR 960 - Doctoral Seminar in Marketing
Martin J. Whitman School of Management
3 credit(s) Irregularly
Repeatable

Repeatable

MAR 962 - Marketing and Supply Chain Models
Martin J. Whitman School of Management
3 credit(s) Irregularly
Crosslisted with: SCM 962

Statistical/econometric and management science modeling approaches to marketing/supply chain management problem solving.

Managerial Statistics

MAS 653 - Accelerated Managerial Statistics
Martin J. Whitman School of Management
3 credit(s) Irregularly
Descriptive statistics, probability, sampling, estimation, hypothesis testing, time-series analysis, simple and multiple regression, and statistical decision theory.

PREREQ: MBC 638

MAS 723 - Nonparametric Statistics
Martin J. Whitman School of Management
3 credit(s) Irregularly
Statistical methods that make no assumptions about the probability distribution sampled. Methods based on signs, ranks, and order statistics, related aspects of probability theory, statistical inference, special procedures, and case examples.

PREREQ: MBC 638
MAS 788 - Causal Modeling and Analysis  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Multivariate Statistical techniques and analysis strategies for formulating and testing causal models using both experimental and nonexperimental data sources. Path analysis, correlation and causality, sources of estimation-bias interpretation and limitations simultaneous equation models, confirmer, factor analysis, measurement error and latent variable models, and structural equations.  
PREREQ: MBC 603

MBC 600 - 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

MBC 601 - Economic Foundations of Business  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Business applications of selected economic tools such as supply and demand, production, costs, and the basic models of market structure. The use of these tools for managerial decision making.

MBC 602 - Economics for International Business  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
PREREQ: MBC 601

MBC 603 - Creating Customer Value  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
How marketing managers develop an organization-wide customer orientation and create customer value through strategic planning, systematic analysis of the market environment, effective customer segmentation, target market selection, and product positioning.

MBC 604 - Managing the Marketing Mix  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Concepts and skills needed for developing and implementing the product, pricing, distribution, and communication strategies for goods and services. Focus on building sound, actionable, integrated marketing plans based upon target market and positioning strategies.  
PREREQ: MBC 603

MBC 606 - Information Technology for Decision Support  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Information technology tools for decision support using spreadsheets and databases. Spreadsheet fundamentals, data extraction from databases, what-if analysis, scenario evaluation, and finding optimal solutions to problems.  
PREREQ: MBC 607

MBC 607 - Understanding Financial Statements  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Financial statement information and related disclosures. Interpretation of financial information to assess and evaluate firm performance.  
PREREQ: MBC 607

MBC 608 - Creating Financial Statements  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Financial accounting concepts and procedures to record business activities. Presentation of business activities in financial statements.  
PREREQ: MBC 607

MBC 609 - Accounting for Managerial Decisions  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
An understanding of the usefulness of the accounting information in helping managers with their decision making and decision influencing tasks.  
PREREQ: MBC 608

MBC 610 - Opportunity Recognition and Ideation  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Focuses on four critical skill areas for contemporary M.B.A. students, including opportunity recognition: recognition, opportunity assessment, creative problem solving, and translation of creativity into bold business ideas.  
PREREQ: MBC 602

MBC 611 - Supply Chain Management  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
The management of flows of resources both within and between organizations with the aim of achieving strategic advantages in terms of quality, price, choice, speed, and flexibility.

MBC 617 - Supply Chain Management  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Techniques and tools to analyze how competitive advantage is created and sustained, focusing on business-level strategy. Topics include industry and competitor analysis, firm resources and capabilities, competitive strategies, and competitive dynamics.  
PREREQ: MBC 607

MBC 619 - Corporate Strategy  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Corporate-level strategy and analysis of the scope of a firm's activities. Topics include vertical integration, alliances, global strategy, diversification, and managing the multibusiness firm.  
PREREQ: MBC 608 AND MBC 618

MBC 627 - Financial Markets and Institutions  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
The nature of the firm's financial environment and the implications for financial management. Characteristics and functions of major financial institutions and markets. Debt markets, equity markets, interest rates, initial public offerings, private equity, and valuation of financial assets.  
PREREQ: MBC 601, MBC 602, MBC 607, MBC 608, AND MBC 638

MBC 628 - Fundamentals of Financial Management  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
Major decisions facing financial managers. Emphasis on the firm's investments decision and the tools used in its analysis. Market efficiency, risk-return analysis, valuation of real assets, and investing in risky assets.  
PREREQ: MBC 627

MBC 629 - Legal and Ethical Aspects of Management  
Martin J. Whitman School of Management  
1.5 credit(s) At least 1x fall or spring  
An analysis of the legal and ethical environments of business and how they influence managerial decision making and advance business objectives.
The course uses cases and discussion to probe selected legal, public policy, and ethical issues affecting business.

MBC 630 - Behavior in Organizations
Martin J. Whitman School of Management
1.5 credit(s) At least 1x fall or spring
The course will cover the topics of motivation, leadership, individual differences, perception, job design, stress, and cultural diversity in the global economy. This course will address both the prescriptive and descriptive perspectives.

MBC 631 - Financial Accounting
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Impact of accounting information and accounting method choice on corporate decision making, reported results and financial evaluation through application of analysis techniques to published financial statements.

MBC 632 - Managerial Accounting
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Theory, design elements and application of cost management accounting to manage economic organizations. Focus on how accounting measures can be used to promote efficient resource allocation/consumption within the organization.
PREREQ: MBC 631

MBC 633 - Managerial Finance
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Language and tools of finance. Modern theory and practice of corporate finance. Enables ability to evaluate firm’s financing, investment and dividend decisions as they relate to firm’s objectives.
PREREQ: MBC 631

MBC 634 - Introduction to Information Technology and E-commerce
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
How traditional and e-commerce enterprises use various information technologies. The focus is on why these ITs work and on the business, managerial, organizational, and technological issues surrounding their use.

MBC 635 - Operations and Supply Chain Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Management of the resources used to create and distribute goods and services with the aim of achieving strategic advantages in terms of quality, price, choice, speed, and flexibility.

MBC 636 - Marketing Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Developing an organization-wide marketing orientation and developing skills needed to make strategic and tactical decisions in marketing.

MBC 638 - Data Analysis and Decision Making
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Concepts, principles and methods to support scientific approach to managerial problem solving and process improvement. Basic statistical techniques, their appropriateness to situations and assumptions underlying their use.

MBC 639 - Leadership in Organizations
Martin J. Whitman School of Management
3 credit(s) Every semester
Examines leadership on both a knowledge and skill basis. Leadership from a business perspective on three levels: individual, team, and organization.

MBC 642 - Strategic Human Resource Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Managing human capital to create competitive advantage. Topics include strategic reward systems, performance management, attracting and developing human assets, human resource architecture design, managing workforce heterogeneity, managing organizational conflict, and legal environment of employment.

MBC 643 - The Legal and Ethical Environments of Business
Martin J. Whitman School of Management
3 credit(s) Irregularly
Analysis of the legal and ethical environments of business and how they influence managerial decision making and further the objectives of the business. Discussion of cases that raise issues of law, public policy, and ethics.

MBC 645 - Strategic Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Strategy and its integrative role in management. Concepts, models, and skills for developing strategies to create and sustain competitive advantage in a dynamic and global environment. Topics include environmental analysis, strategy formulation, and strategy implementation.

MBC 647 - Global Entrepreneurial Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
The utilization and integration of functional area knowledge to successfully plan and launch new ventures and concepts in start-up, corporate, and nonprofit contexts.

MBC 691 - Experiential Perspectives and Applications
Martin J. Whitman School of Management
1.5-3 credit(s) Every semester
A set of structured managerial experiences involving the application of managerial concepts, frameworks or theories; substantive engagement with professionals within for-profit and/or non-profit organizations; and specific deliverables at the completion of each experience.
Repeatable 5 time(s), 9 credits maximum

MBC 700 - Business Perspectives and Applications
Martin J. Whitman School of Management
1 credit(s) Every semester
Residencies allow students to meet face-to-face to supplement their online coursework. They focus on a topic relevant to its location. Students will learn from global business leaders who will engage them in highly interactive learning.
Repeatable 5 time(s), 6 credits maximum

Management

MGT 656 - Human Resource Management
Martin J. Whitman School of Management
3 credit(s) Irregularly

MGT 701 - Women in Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Investigate the opportunities and obstacles that women face in management and develop skills for leading women and men in order to improve individual, group and organizational performance. Enhance critical thinking skills essential for managers.

MGT 702 - Transformational Management
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
The development of personal skills in designing, implementing, and processing structured learning intervention that facilitate comprehension of organizational dynamics as well as foster real organizational learning and transformation. An experiential learning methodology will be employed.
MGT 703 - Organizational Process Consultation Skills  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
Develop group process consultation skills necessary for creating high performance work groups as well as developing collaborative and learning relationships between groups within an organization.

MGT 704 - Job Satisfaction, Motivation, and Work Behavior  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Theories analyzed in terms of soundness, research support, and management implications. Work design and environment, reward systems in relation to employee motivation, stress, job satisfaction and performance.

MGT 705 - Organizational Theory and Design  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Contemporary organizational systems, structural variables, and dynamics: the organization, organizational growth, effects of size and technology, emergence of new control systems, forms of organizational pathology, and directions of change in organizational pathology, and directions of change in organizational forms.

MGT 709 - Business Policy  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Interdepartmental approach to policy-making and administration from a top-management point of view. Thinking about business problems from an overall point of view.

MGT 710 - Administrative Policy  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Applies the principles and techniques of management to the life-cycle management process through the use of a computerized management simulation program. Includes consideration of policy-making issues from the top management point of view. Repeatable

MGT 750 - Compensation Administration  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Double Numbered with: MGT 454  
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 754 - Human Resource Assessment and Staffing  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Concepts, problems, and research related to the assessment of individual qualifications for employment and performance when recruiting, staff planning, and allocating staff resources.  
PREREQ: MGT 355 OR 656

MGT 755 - Collective Bargaining  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
History and development of collective bargaining in the United States. Structure, processes, and institutional framework of collective bargaining within the industrial relations systems.

MGT 756 - Leadership and Organization Change  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Double Numbered with: MGT 462  
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 757 - Career Planning, Training, and Development  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Theory and analysis of the empirical evidence related to training, career planning, and development concepts, methods, and programs. Conditions of learning, program evaluation, staff and career-planning models.

MGT 758 - Labor Arbitration and Dispute Resolution  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Economic, social, and legal implications of labor arbitration. Historic and contemporary problems commonly adjudicated by labor arbitrators. Theoretical and empirical evidence of the effectiveness of various dispute resolution strategies.

MGT 759 - Strategic Planning and Corporate Forecasting for Innovative Organizations  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Focuses on innovative growth organizations continually subject to technological and economic uncertainties.

MGT 760 - Information Systems Analysis for Management  
Martin J. Whitman School of Management  
3 credit(s) Irregularly  
Analysis and design of management information systems in the context of cost and behaviorally effective managerial decision making. Structured design methods, systems controls, and documentation. Readings in selected areas required.  
PREREQ: MBC 634

MIS 625 - The MIS Data Base  
Martin J. Whitman School of Management  
3 credit(s) At least 1x fall or spring  
PREREQ: MIS 625/ISM 741

MIS 645 - Implementing a Web-enabled Enterprise  
Martin J. Whitman School of Management
Management of Technology

MOT 711 - Innovation and Technology Management
Martin J. Whitman School of Management
3 credit(s) Every semester
Focuses on innovation and technology management in different organizational contexts, e.g., manufacturing, e-commerce, and services. Models of innovation are examined as well as the involvement of key stakeholders. Major factors influencing innovation are examined.

Real Estate

RES 600 - Selected Topics
Martin J. Whitman School of Management
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

RES 631 - 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.

RES 642 - Real Estate Development
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: RES 442
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.

RES 643 - Real Estate Capital Markets
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: FIN 643
Double Numbered with: RES 443
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 751 OR FIN 756

RES 662 - 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.

Supply Chain Management

SCM 651 - Business Analytics
Martin J. Whitman School of Management
3 credit(s) Every semester
Business analytics including advanced spreadsheets; relational database and SQL queries; statistical analysis in R including multi-linear regression, interactions, tests for regression assumptions, logit, probit; neural networks; and dashboards.

SCM 655 - Customer Relationship Management with Systems Applications and Products
Martin J. Whitman School of Management
3 credit(s)
Crosslisted with: MAR 655, MIS 655
Integration of marketing, supply-chain and technology management aspects of customer relationship management. Operational, analytical and collaborative processes supported by SAP’s integrated software. Actual use of SAP software, including Business Data Warehouse, with best-practice processes.

SCM 656 - Project Management
Martin J. Whitman School of Management
3 credit(s) Every semester
Elements of successful project management. The organization and planning necessary from requirements definition to project closure. Project management processes and techniques.

SCM 690 - Independent Study
Martin J. Whitman School of Management
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

SCM 701 - Supply Chain and Logistics Management
Martin J. Whitman School of Management
3 credit(s) Every semester
Quantitative and qualitative analysis of global supply chains, channels of distribution, and logistics networks. Extensive use of cases. PREREQ: MBC 635, MBC 636, AND MBC 638

SCM 702 - Principles of Management Science
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Concepts and development of analytical model building as used in global supply chain decision. PREREQ: MBC 617 OR MBC 635 AND MBC 638

SCM 721 - Supply Chain Systems
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Theory and application of supply chain systems. Manufacturing resource planning, distribution requirements planning, electronic data interchange, tracking technologies, vendor managed inventory, collaborative planning, forecasting, and replenishment, emerging issues.

SCM 741 - Strategic Sourcing
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Impact of strategic sourcing on the success of businesses. Ethical, contractual, and legal issues faced by purchasing professionals. Strategic nature of purchasing, negotiating tactics, international sourcing and cutting-edge technology used in ‘world class’ purchasing departments. PREREQ: MBC 635

SCM 755 - Lean Six Sigma
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Double Numbered with: SCM 455
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.

SCM 777 - Global Supply Chain Strategy
Martin J. Whitman School of Management
3 credit(s) At least 1x fall or spring
Crosslisted with: MAR 777

Topics include: design of global facility networks, containerization and logistical planning across borders, benefits and risks of outsourcing and offshoring while integrating financial and accounting-related matters such as exchange rates, duties, drawbacks and tax differentials. PREREQ: MBC 616, MBC 638

SCM 960 - Doctoral Seminar in Supply Chain Management
Martin J. Whitman School of Management
3 credit(s) Irregularly
Repeatable

SCM 962 - Marketing and Supply Chain Models
Martin J. Whitman School of Management
3 credit(s) Irregularly
Crosslisted with: MAR 962
Statistical/econometric and management science modeling approaches to marketing/supply chain management problem solving.

SCM 999 - Dissertation
Martin J. Whitman School of Management
0-15 credit(s) At least 1x fall or spring
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, three-building 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:

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

- Media & Education, CAS
- Advertising, MA
- Arts Journalism, MA
- Audio Arts, MA
- Broadcast and Digital Journalism, MS
- Communications, MS
- Communications Management, MS
- Computational Journalism, MS
- Documentary Film and History, MA
- Magazine, Newspaper, and Online Journalism, MA
- Media & Education, MA
- New Media Management, MS
- Media Studies, MA
- Photography, MS
- Public Diplomacy, MS/MA
- Public Relations, MS
- Television, Radio and Film, MA

Graduate: Doctoral Level

- Mass Communications, PhD

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.

Graduate Education

Lorraine Branham, Dean
Joel K. Kaplan, Associate Dean for Professional Graduate Studies
Dennis Kinsey, Director of Doctoral Studies
Maria P. Russell, Director, Executive Education Programs

The S.I. Newhouse School of Public Communications offers Master's degree programs in advertising; arts journalism; audio arts; broadcast and digital journalism; computational journalism; documentary film and history; magazine, newspaper, and online journalism; media and education; new media management; photography; public diplomacy; public relations; and television, radio and film. In addition to these...
residential programs, the Newhouse School offers an online Master's program in communications with specializations in advertising, public relations, and journalism innovation. A Certificate of Advanced Study is also available in media and education in conjunction with the School of Education.

In addition to the professional Master's degree programs, the School offers a research-based Master's degree program in media studies.

At the executive, mid-career level, the Newhouse School offers an interdisciplinary, Master's degree program in communications management for those who have a minimum of five years full-time experience in public relations or communications.

At the doctoral level, the mass communications program is designed for advanced study in research, analysis of public communications, and teaching. For a complete listing of faculty members associated with the Newhouse School, see the Faculty section of the Graduate Course Catalog.

Admission

Master's Degree Programs

Applicants for Master's degree programs must have Bachelor's degrees from accredited colleges or universities and, with the exception of applicants to the Audio Arts, the online Communications program, Media and Education, and the Photography programs, they must take the Graduate Record Examination. (GMAT scores can be substituted for applications to the New Media Management program.) Television, Radio and Film applicants have the option of submitting either scores from the GRE exam or a portfolio of professional accomplishments. Applicants to the photography Master's program and to the executive mid-career Master's program in communications management are each required to submit a portfolio for admission.

International students who have not received a previous degree from a college or university in the United States or who have not studied for one year at a college or university in an English-speaking country must take the TOEFL (Test of English as a Foreign Language) examination or IELTS (International English Language Testing Systems) examination, in addition to the GRE.

More detailed information about the application can be found at http://newhousemasters.syr.edu. Inquiries for the professional Master's programs should be directed to the Graduate Records Office, S. I. Newhouse School of Public Communications, masscomm@syr.edu, 315-443-3372.

Doctoral Program

Only students with outstanding records will be considered. A candidate must be a graduate of an accredited college or university and have a master's degree or equivalent in communications or a field considered appropriate by the school's committee on graduate programs. Inquiries about the doctoral program should be directed to the Director of Doctoral Studies, Newhouse School of Public Communications, masscomm@syr.edu, 315-443-3372.

Program Requirements for Master's Degree

All candidates for master's degrees must satisfactorily complete no fewer than 30 graduate credits approved by the dean of the S.I. Newhouse School of Public Communications and the Graduate School. The specific number of credits required varies from 30 to 58 credits. (See the program descriptions for specific requirements under Academic Offerings.) At least half of a student's classroom courses must be 600-level or above. Except where noted, Newhouse courses carry three credits.

Master's students at Newhouse are allowed to transfer a maximum of 20% of their total required credits into their program. Specific credit earned at another accredited graduate school must carry at least a grade of B, must have been taken within seven years, must not have been used toward an undergraduate degree or its equivalent, must form an integral part of the degree program, and must be evaluated by the academic department and the Associate Dean for Professional Graduate Studies. Students must fill out a petition form and submit a syllabus and an official transcript. Petitions for transfer credit should be completed during the student's first semester of study.

The completion of a specific number of courses does not, in itself, qualify the candidate for completion of the program. Each of the programs of study requires the completion of coursework as well as a culminating experience through which the student is given the opportunity to demonstrate his or her mastery of public communications. This culminating experience may involve a capstone course, comprehensive examination, special project, or a thesis, depending on the student's program of study.

A thesis is required in the Media Studies program and, in certain cases, allowed in other programs. A thesis or graduate project is also required for the Master's degree in Photography. The thesis is regarded as a test of the student's ability to do investigative work and to present the results in clear, accurate, and logical form. A good command of literary expression is required. A student required or electing to do the thesis must register for 3 to 6 credits of thesis work.

The Television, Radio and Film program requires students to complete their program with a comprehensive examination. Students must complete a minimum of 30 credits before taking the exam.

Public relations students who do not pursue the thesis option must complete an internship in addition to their comprehensive examination.

In addition to the Master's degree programs described above, the School offers dual-degree options with the College of Law on a space-available basis.

Graduate Awards

Newhouse Foundation Fellowship/Internship for Minorities

Established in 1993, these awards are made annually to two minority students who wish to enroll in the Magazine, Newspaper, and Online Journalism Master's program and who intend to pursue a newspaper career. Only students who have majored in subjects other than journalism on the undergraduate level are eligible. Funded by the Newhouse Foundation, each award provides free tuition and a monthly stipend for 18 months of study (during which time the student also works as a reporting intern at the Syracuse Media Group).

Doctoral Awards

In addition to University fellowships and scholarships, the Newhouse School funds up to five new doctoral students each year who help support research or the teaching of undergraduate classes. Some research assistants work with either the John Ben Snow Chair or the S.I. Newhouse Professor.

Liu Foundation Multicultural Scholarships

Established in 2003, these awards are designated for outstanding applicants who demonstrate financial need, have a background and/or interest in multicultural communications, and demonstrate a career interest related to multicultural communications. Such background interest might be indicated by undergraduate study abroad, an undergraduate major in a foreign language, and/or communications work experience in a non-U.S. setting.

Instructional Associates

The Newhouse School has a number of instructional associates (IA) who spend 5 to 20 hours per week helping faculty members with classes or labs. They are paid $17.20 per hour and also receive tuition scholarships (usually 7.5 credits per semester). Some positions are just for one semester, and others are for the academic year; the appointments depend upon what courses are being taught for a particular semester. IAs assist with classes by leading discussion sessions, helping with grading and meeting with students during office hours. Some also work in labs, helping undergraduate students with specialized equipment.

Online Education

Master of Science in Communications

The online masters in communications program prepares media professionals to succeed in today's world of mass media and digital communications. With classes created and taught by Newhouse faculty, the master's in communications offers students around the world
the opportunity to receive the highest quality education without relocating. Students can start their degree in January, April, July or October. The program is intended for students with bachelor’s degrees and/or backgrounds in media and communications, journalism, public relations, advertising, media business management, and related fields. Students may choose from three secondary focus tracks: Journalism Innovation, Public Relations, and Advertising.

There are two required immersions which take place Friday through Sunday in various locations. (Past immersions have been in Syracuse, New York City, and Los Angeles.) During the immersion, students come together to learn from professionals in the field, interact with their classmates and faculty, network with Newhouse alumni and work together on a case study on a specific topic. This program is designed to be completed in as little as 15 months.

Executive Education

Master of Science in Communications Management

The executive master’s degree program in communications management is for experienced public relations professionals (minimum of five years of full-time experience). Since 1995, the Newhouse School’s fine reputation in public relations education has been extended to experienced professionals whose busy work and personal lives won’t allow them to earn a master’s degree in the traditional manner - even if a good program is just a few miles away. Students come from all types of public relations specializations. They come to our program from across the United States and countries around the world, including Argentina, Brazil, Canada, Germany, Hong Kong, Italy, Lebanon, Poland, Switzerland, the Sudan, Taiwan, Vietnam, and the Caribbean.

This interdisciplinary program combines courses in public relations, business and leadership -- the fusion of the knowledge, skills and abilities needed for career advancement in the changing face of the public relations profession in an ever-changing world. Students participate in a highly effective hybrid format of short-term residencies and distance learning. A new class forms each year in August. Application deadline: May 15.

For more information contact the director, Anthony D’Angelo, at dangeloa@syr.edu or at 315-443-3368.

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, video editing, digital sound editing, 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 field-equipment facility that manages the School's digital video cameras (HD and DSLR formats), lights, microphones, and other production accessions. Post-production facilities include video editing stations (AVID®, Adobe Premiere, and Final Cut Pro®, a 16-channel, digital music-recording studio; two digital post-production 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® 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® 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 five-studio 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® video switchers, Xydis® 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 technologies including drones, a 30-foot touch screen, Google watches and glasses, 360° cameras, and technology which supports the creation of virtual reality programming. The University’s Orange Television Network http://orangetv.syr.edu/ is also headquartered in Newhouse 2.

Newhouse 3 houses a 300-seat auditorium; a collaborative media suite in which students can build interactive sites; executive production 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. Since 1997, the center has been overseeing the acquisition and editing of an ongoing series of books published by Syracuse University Press about television and other popular culture subjects, and maintaining a large archive of original interviews with pioneers of American television, as well as a collection of television scripts and production materials. The center provides expertise to a wide variety of TV, radio, and print reporters. On-campus activities include symposiums, guest lecturers, and weekly screenings, all of which are open to the public. For further information contact Dr. 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, and events with the start-up community in NYC), 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 internships 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 jnicholson01@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 315-443-3523, http://tully.syr.edu/

The W2O-Newhouse Center for Social Commerce

The W2O 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 W2O 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 cutting-edge techniques, and internships in W2O 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@library.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, MRI, Alliance for Audited Media’s Media, LibraryPressDisplay, ProQuest Historical Newspapers, SCOLA, AP Images, Vanderbilt University’s Television News Archive, JSTOR, Communication Source, World Advertising Research Center, Mintel Reports, eMarketer, AdSpender, 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 streaming 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 and the Blackstone Launchpad, a cross-campus center for entrepreneurship.

Tully Center for Free Speech

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-Wiliam Safire, 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 Conwin, 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.

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Academic Emphasis (6 Credits)

Students are expected to complete an emphasis that satisfies their individual career goals. Faculty advisers will work with students to put together two electives to fulfill the requirement and to build a critical understanding of their study interest in advertising. This approach helps to accommodate the significant changes occurring in the marketplace and media by providing a fluid curriculum that can readily react to change.

Recommended emphases can include, but are not limited to the following: Digital Engagement, Brand Management, Media Planning, Cross-Cultural Advertising, Fashion Promotion, Health Promotion, Non-Profit Promotion.

Contact: James Tsao, Chair
318 Newhouse 3, 315-443-7362

Faculty
Beth Egan, Amy P. Falkner, Rebecca Ortiz, Edward W. Russell, Brian Sheehan, James Tsao, Melanie White

Advertising is a fast-paced industry, changing with the times and, along with other communications professions, riding the digital wave into new waters. Our one-year, intensive advertising graduate program prepares students to work in this exciting industry and gives them the professional strategies they’ll need to succeed and thrive.

This 36-credit program leads to a Master of Arts (M.A.) in Advertising.

Required Courses
- ADV 523 - Digital Branding and Strategy 3 credit(s)
- ADV 604 - Seminar in Advertising Practice and Leadership 3 credit(s)
- ADV 611 - Strategic Principles and Practices 3 credit(s)
- ADV 612 - Strategic Brain: Account Planning and Research 3 credit(s)
- ADV 613 - Strategic Brain: Media Planning 3 credit(s)
- ADV 615 - Creative Brain 3 credit(s)
- ADV 625 - Integrated Advertising Campaigns 6 credit(s)
- COM 698 - Media Law 3 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)

Academic Emphasis (6 Credits)

Students are expected to complete an emphasis that satisfies their individual career goals. Faculty advisers will work with students to put together two electives to fulfill the requirement and to build a critical understanding of their study interest in advertising. This approach helps to accommodate the significant changes occurring in the marketplace and media by providing a fluid curriculum that can readily react to change.

Recommended emphases can include, but are not limited to the following: Digital Engagement, Brand Management, Media Planning, Cross-Cultural Advertising, Fashion Promotion, Health Promotion, Non-Profit Promotion.

Contact: Eric Grode, Director, ejgrode@syr.edu
Janet Anthony, Assistant Director, jcanthos@syr.edu
333 Newhouse 2, 315-443-9251

Faculty
The Goldring Arts Journalism program is the first program at an accredited journalism school to train journalists to write about arts and culture. Based at the S.I. Newhouse School of Public Communications, the program is an interdisciplinary collaboration with the School of Architecture, the College of Arts and Sciences, and the College of Visual and Performing Arts, giving students access to an array of arts and journalism courses taught by writers, academics, and artists.

Program Requirements

The curriculum offers a uniquely flexible combination of arts and communications courses to meet the educational objectives of each student. The student will arrive with specialized expertise or declared interest in areas such as architecture, film, music, popular culture, television, theater, or the visual arts. Working closely with two advisors—the program director and a faculty member specializing in one of the concentrations—students identify their educational objectives and create their own curricula of journalism and arts courses. Through its core courses, the Goldring Arts Journalism program offers opportunities for experiential and cross-disciplinary learning. During the program year, students are encouraged and assisted in interning at media organizations, creating community arts online content, visual and audio journalism, as well as undertaking freelance professional publication in order to build and expand a professional portfolio.

The 36-credit Master of Arts (M.A.) degree is completed in one calendar year. The intensive program begins at Syracuse University in early July. In the fall and spring, students take journalism and arts classes and have the option of a magazine or newspaper internship. During the winter break, students attend an arts-immersion trip to New York City, which includes attendance at theater and music performances, film screenings, museum and gallery tours, architectural site visits, symposia, and lectures; encounters with artists and administrators at major arts institutions, and writing workshops with arts editors and writers. The program concludes with a capstone writing experience in May and June. The program was made possible by a gift from SU Trustee and arts patron Lola Goldring and her husband Allen. Additional information is available at http://artsjournalism.syr.edu

Required Courses: 24 credits

- AJP 631 - Capstone Arts Writing Workshop 6 credit(s)
- AJP 636 - Cultural Media Practicum 3 credit(s)
- COM 698 - Media Law 3 credit(s)
- NEW 605 - News Writing and Reporting 3 credit(s) *

Note:

* Students with substantial journalism background may petition to substitute a suitable elective.

Electives (9 Credits)

Additional graduate courses in areas such as architecture, film, fine arts, music, or theater, as well as journalism, communications, and writing courses.

Total: 36 credits

Audio Arts, MA

Contact:

Douglas Quin, Co-Director
315-443-7398, dhquin@syr.edu
David Rezak, Co-Director
315-443-3280, dmrezak@syr.edu

Faculty:

Various faculty from the College of Visual and Performing Arts’ and the S.I. Newhouse School of Public Communications.

M.A. in Audio Arts

Audio Arts is a joint graduate studies program harnessing the experience and strength of the College of Visual and Performing Arts and the S.I. Newhouse School of Public Communications. Four specialization tracks are offered in distinctive areas of audio practice: Music Industry, Audio Recording, Radio Horizons and Music Video.

The holder of an M.A. in the Audio Arts with specialization in Music Industry will be prepared to enter one of dozens of career paths. Graduates will embrace the trust-based relationship they must develop with artists and be able to think critically and constructively about audio and music and making a market in an art form. The student’s self-directed curricular specialization choices and internship focus will dictate the job options.

Admission

The Audio Arts admissions process seeks to measure applicants along several criteria in search of a holistic measure of student potential. Though experience in music and audio is valued in the process, the most important aspects in a prospective student’s profile are a demonstrated work ethic, broad and varied education and life experience and deep passion to succeed and contribute to the audio arts.

Accreditation

The Audio Arts Master’s Program was created to comply with and/or exceed the standards of two accrediting bodies: The National Association of Schools of Music and the Accrediting Council for Education in Journalism and Mass Communication.

Program Requirements

Required Courses: 24 credits

- EEE 620 - Foundations of Entrepreneurship 3 credit(s)
- RAE 601 - Audio Arts Graduate Survey 3 credit(s)
- RAE 610 - Audio Arts Colloquium 1 credit(s) (three 1-credit modules)
- RAE 675 - Audio Arts Industry Practicum 3 credit(s)
- TRF 510 - Specialized Practice 1 credit(s) (three 1-credit modules)
- TRF 605 - Audio Arts Practices 3 credit(s)
- TRF 637 - Telecommunications Law & Policy 3 credit(s)

Capstone in Audio Arts, choose one:

- TRF 600 - Selected Topics 1-6 credit(s) Human-Computer Interaction
- TRF 642 - Television Production Workshop 3 credit(s)
- TRF 668 - Advanced Audio 3 credit(s)
- TRF 669 - Advanced Filmmaking 3 credit(s)

Note on Newhouse School-wide Requirements for Graduate Programs

The required law and research components are fulfilled with the following coursework:

- Law Component: TRF 637 - Telecommunications Law & Policy

Together, these courses introduce students to the practice and application of research to audio arts issues and ideas. The dynamic context of entrepreneurial foundations is a particularly fitting place for students in the program to develop their research skills in anticipation of the uncertain and often volatile audio arts fields they will one day lead.

In addition, the Research for Entertainment Media class (TRF 696) will be an elective part of each area of audio arts specialization.

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Electives: 12 credits
Electives include twelve credits of specialization to focus on an individual’s interests and strengths. The curriculum will allow for enough elective flexibility to create a “focus area”:

Fields of specialization
- Music Industry
- Sound Production & Arts
- Radio Horizons
- Music Video

Transfer Credit
Up to 6 credits of approved non-matriculated graduate coursework

Satisfactory Progress:
3.0 Minimum GPA for Graduation

Total Credits Required: 36

Degree Awarded: M.A. in Audio Arts

Broadcast and Digital Journalism, MS

Contact:
Chris Tuohey, Chair,
318B Newhouse 3, 315-443-4118.

Faculty
Hubert Brown, Michael Cremedas, Barbara C. Fought, Dona Hayes, Keren Henderson, Suzanne Lysak, John Nicholson, Simon Perez, Les Rose, Donald C. Torrance, Chris Tuohey, Randy Wenner

The master’s degree program in broadcast and digital journalism is designed to provide the necessary combination of practical training and theoretical study to prepare students for careers in electronic journalism. All students take required coursework in writing, information gathering and reporting, editing, producing, and anchoring for both traditional and new media platforms. No previous training in broadcasting or journalism is required.

The final on-campus capstone course for the master’s degree involves the production of two daily newscasts. 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.

The on-campus capstone is followed by a summer seminar and internship in Washington, D.C. (Students who choose to be involved in the Sports Communications Emphasis may be placed in internships elsewhere.)

This 40-credit program leads to a Master of Science (M.S.) in Broadcast and Digital Journalism.

Required Courses (34 Credits)
- BDJ 510 - Topics in Specialized Practices 1 credit(s)
- BDJ 611 - Writing for Broadcast and Digital News 3 credit(s)
- BDJ 636 - Critical and Historical Perspectives on Broadcast Journalism 2 credit(s)
- BDJ 663 - News Reporting I 3 credit(s)
- BDJ 664 - News Reporting II 4 credit(s)
- BDJ 665 - News Producing & Presenting 6 credit(s)
- BDJ 667 - News Reporting III 4 credit(s)
- BDJ 675 - Washington Professional Experience 4 credit(s)
- COM 647 - Applied Media Research 3 credit(s)
- COM 670 - Experience Credit 1-6 credit(s)
- COM 698 - Media Law 3 credit(s)

Electives (6 Credits, Choose Two Courses)
Selection varies in any given year.

Total: 40 credits

Communications Management, MS

Limited Residency/Distance Learning Executive Program For Public Relations Professionals

Contact:
Anthony D’Angelo, Academic Director
315-443-3368
Fax: 315-443-3946
commg@syr.edu
http://newhouse.syr.edu/Academics/Communications_Management/overview.cfm

Program Requirements
Since 1995, the S.I. Newhouse School of Public Communications and its Department of Public Relations have offered an interdisciplinary 36-credit Independent Study Degree Program leading to a Master of Science (M.S.) degree in Communications Management for a select group of experienced public relations and communications practitioners (minimum five years full-time experience in public relations or related field required).

The master's program draws upon the interdisciplinary strengths and international reputations of the Newhouse School, the Maxwell School of Citizenship and Public Affairs, and the Martin J. Whitman School of Management. The program takes two years to complete, with a required five-day residency on the Syracuse University campus at the start of the fall term (mid-August); a required five-day residency at Syracuse University’s Lubin House in New York City in the spring term (early January); and a required five-day summer residency in Syracuse (mid-May). Students enroll in as many terms as meet their professional and personal schedules, but each enrollment requires the residency.

During the residencies, faculty members present an overview of the entire course and the guidelines for independent study. Upon return to his/her community, the student studies and completes assignments at his/her own pace, meeting predetermined deadlines over the 15-week semester. Access to faculty and fellow students is ongoing through the use of Blackboard, conference calls, and online sessions. After completing 30 to 33 credits (10 or 11 three-credit courses), the student chooses to complete the program with either a 6-credit master’s thesis or a 3-credit applied research project and one additional elective.

Courses in this interdisciplinary program are drawn from the following general areas: public relations theory, public opinion research, analytics, communications law, management, communications theory, social and digital media, accounting, finance, organizational behavior, strategic planning, crisis management, problem-solving, conflict resolution, negotiation, leadership, advertising, branding, marketing, and public relations measurement and evaluation.
S.I. Newhouse School of Public Communications

Kevin O'Neill; Dan Pacheco; Adam Peruta; David Rubin; Brian Sheehan; David Sutherland; Corey Takahashi; James Tsao

Description:
The online M.S. in Communications offers an in-depth study and experience with digital systems, strategies, and emergent trends critical, along with foundational knowledge in media law, applied research, theory and practice essential for successful leadership in the changing media industry. The program is intended for students with bachelor's degrees and/or backgrounds in media and communications, journalism, public relations, advertising, media business management, and related fields. Students may choose from three secondary focus tracks: Journalism Innovation, Public Relations, and Advertising.

Part-time study:
This is an online program that may be completed on a full-time or part-time basis.

Requirements:

Core Courses (18 Credits)
The online M.S. in Communications is a 33-credit hour program (ten 3-credit online courses and 3 credit hours of residencies).

• ICC 602 - Introduction to Digital Communications 3 credit(s)
• COM 617 - Multimedia Storytelling 3 credit(s)
• ICC 612 - Digital Communications Systems 3 credit(s)
• COM 627 - Social Media for Communicators 3 credit(s)
• COM 698 - Media Law 3 credit(s)
• ICC 606 - Applied Research in Content Management 3 credit(s) or
• ADV 609 - Advertising and Public Relations Research Design 3 credit(s) or
• PRL 609 - Advertising and Public Relations Research Design 3 credit(s)

Secondary Tracks (Complete One Track, 9 Credits)
Courses are listed in the order they should be taken.

Advertising
• ADV 611 - Strategic Principles and Practices 3 credit(s)
• ADV 610 - Topics in Specialized Practice 3 credit(s)
• ADV 523 - Digital Branding and Strategy 3 credit(s)

Public Relations
• PRL 605 - Public Relations Theory 3 credit(s)
• PRL 725 - Public Relations Management 3 credit(s)
• PRL 615 - Public Relations Campaign Planning & Execution 3 credit(s)

Journalism Innovation
• MNO 611 - Web and Mobile Story Production 3 credit(s)
• MNO 612 - Data-Driven Journalism 3 credit(s)
• MNO 613 - Emerging Media Platforms 3 credit(s)

Capstone (3 Credits)
• ICC 622 - Digital Communications Strategy and Entrepreneurship 3 credit(s)

Residencies (3 Credits)
• ICC 632 - Media Industry Leadership and Change 1.5 credit(s) Taken twice.

Total Credits: 33

Computational Journalism, MS

Contact:
Stephen Masiclat, masiclat@syr.edu
Professor, Co-Director, 255 Newhouse 3
315-443-9243
Jae C. Oh, jcoh@syr.edu
Associate Professor, Co-Director, 4-206 Sci & Tech

Faculty
Aileen Gallagher, Roy Guterman, Stephen M. Masiclat, Nancy McCracken, Kishan G. Mehrotra, Jae C. Oh, Adam R. Peruta

The computational Journalism program prepares students for the application of computation to the activities of journalism such as information gathering, organization, and dissemination while upholding values of journalism such as accuracy and verifiability. The program prepares students to learn computing fundamentals and skills required for supporting journalistic activities such as news gathering, investigative journalism, verification/fact finding, and authoring/printing/publication/broadcasting of news, sharing and distribution of news information, editing and commenting on news.

Admission:
Bachelor's degree from an accredited institution in Computer Science or Journalism, or Bachelor's degree from an accredited institution and significant experience working as a professional journalist (applicant must provide a portfolio of published/broadcast stories).

This 36-37 credit program leads to a Master of Science (M.S.) in Computational Journalism.

Requirements:

Track No 1 Students with a B.S. in Computer Science or related degree
• CIS 668 - Natural Language Processing 3 credit(s) or
• IST 664 - Natural Language Processing 3 credit(s)
• COM 670 - Experience Credit 1-6 credit(s)
• COM 698 - Media Law 3 credit(s)
• CPS 688 - Algorithms for Computational Journalism and Linguistics 3 credit(s)
• CPS 782 - Capstone Project Course for Computational Journalism 3 credit(s)
• GRA 617 - Visual Communications Theory and Practice 3 credit(s)

Track No 2 Students with a B.A. or B.S. in Journalism
• CIS 668 - Natural Language Processing 3 credit(s) or
• IST 664 - Natural Language Processing 3 credit(s)
• COM 670 - Experience Credit 1-6 credit(s)
• COM 698 - Media Law 3 credit(s)
• CPS 621 - Introduction to Probability and Statistics 4 credit(s)
• CPS 688 - Algorithms for Computational Journalism and Linguistics 3 credit(s)
• CPS 681 - Explorations in Computing and Programming 3 credit(s)
• CPS 782 - Capstone Project Course for Computational Journalism 3 credit(s)
• GRA 617 - Visual Communications Theory and Practice 3 credit(s)

Total Credits: 36

459
Management 3 credit(s)

- NEW 535 - Newspaper and Magazine Practicum 1-3 credit(s)

A Newhouse, CIS/CPS, IST elective, subject to advisor's approval (3 credits)

Total Credits: 37

Possible Elective Choices (others allowed with advisor's approval):

CIS options

- CIS 681 - Software Modeling and Analysis 3 credit(s) or
- CSE 681 - Software Modeling and Analysis 3 credit(s)
- CIS 687 - Object Oriented Design 3 credit(s) or
- CSE 687 - Object Oriented Design 3 credit(s)

IST options

- IST 657 - Basics of Information Retrieval Systems 3 credit(s)
- IST 719 - Information Visualization 3 credit(s)
- IST 736 - Text Mining 3 credit(s)

Newhouse options

- ICC 600 - Selected Topics 1-6 credit(s) (Advanced Web Journalism/Innovation)
- ICC 528 3 credit(s) Multimedia Projects
- MNO 617 - Multiplatform Reporting and Writing 3 credit(s) (for students in track 2)

Documentary Film and History, MA

Contact:
Richard Breyer, Co-Director
315-443-9249 rbreyer@syr.edu
Norman Kutcher, Co-Director
315-443-1264, nakutcher@maxwell.syr.edu

Faculty

Richard L. Breyer, Richard Dubin, Tula Goenka, Sharon R. Hollenback, Norman A. Kutcher, Patricia H. Longstaff, Gladys McCormick, Evan Smith, Junko Takeda, Margaret Susan Thompson, Robert J. Thompson, Donald C. Torrance

The documentary film and history master’s program is a cross-disciplinary program with the Maxwell School of Citizenship and Public Affairs. It is designed for those interested in studying the documentary from various points of view—production, distribution, new media, applications to education at all levels. This master's degree also offers students the opportunity to deepen their understanding of history at the same time that they acquire the practical skills of the filmmaker's craft. Documentary film and history students prepare to work as writers, editors, directors, designers, and executives at independent production companies and organizations, such as The History Channel, Learning Channel, and Public Broadcasting Stations. Graduates also teach media and history.

Program Requirements

The program’s curriculum stresses three general areas of study: writing and production, research, distribution and funding of documentaries and other nonfiction media.

Students in the program begin their studies with an intensive summer experience in July and finish with an internship and production of a documentary the following summer.

This 38-credit program leads to a Master of Arts (M.A.) in Documentary Film and History.

Requirements

- COM 670 - Experience Credit 1-6 credit(s)
- DFH 610 - Documentary Production Research 1 credit(s) taken three times taken three times
- DFH 693 - Oral History Workshop 3 credit(s)
- DFH 695 - Historical Narratives and Interpretation 3 credit(s)
- HST elective Various topics (HST 500-997)
- HST elective Various topics (HST 500-997)
- HST 802 - Modes of Analysis in History 3 credit(s)
- TRF 611 - Dramatic Writing for Television and Film 3 credit(s)
- TRF 637 - Telecommunications Law & Policy 3 credit(s)
- TRF 650 - Advanced Practice: Special Projects 1-3 credit(s)
- TRF 655 - Screenwriting and Production Workshop 3 credit(s)
- TRF 659 - Documentary Production 3 credit(s)
- TRF elective Various Topics (TRF 500-TRF 997)

Total: 38 Credits

Magazine, Newspaper, and Online Journalism, MA

Contact:
Melissa Chessher, Director
315 Newhouse 3, 315-443-4004

Faculty

Harriet Brown, Melissa Chessher, Steve Davis, Aileen Gallagher, Joel Kaplan, Stephen M. Masiclat, Dan Pacheco, Adam R. Peruta, James Shahin, Corey Takahashi

The magazine, newspaper, and online journalism program prepares students to work on the nation’s newspapers, wire services, magazines, and online web sites. Students learn to meet professional standards in whichever specialization they choose: writing, reporting, design, or editing. The program emphasizes deadline requirements, reportage, and field study.

This 36-credit program leads to a Master of Arts (M.A.) in Magazine, Newspaper, and Online Journalism.

Required Courses

- COM 698 - Media Law 3 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)
- ICC 606 - Applied Research in Content Management 3 credit(s)
- MNO 601 - Principles: Business, History, and the Ethics of Journalism 3 credit(s)
- MNO 617 - Multiplatform Reporting and Writing 3 credit(s)
- NEW 605 - News Writing and Reporting 3 credit(s)

Editing (Choose One)

- MNO 608 - Magazine Editing 3 credit(s)
- NEW 508 - Newspaper Editing 3 credit(s)

Electives (Choose Three; 9 Credits)

Electives will be selected in consultation with the student's advisor from the broad range of graduate offerings in the Newhouse School and the University at large. Many students elect to complete an internship (NEW 535) at one of several Central New York newspapers. (Students choosing to participate in Sports Communications Emphasis take two additional one-credit seminars and will complete a total of 38 credits.)

Capstone (6 credits)

- MNO 631 - Journalism Enterprise 3-6 credit(s)
- COM 670 - Experience Credit 1-6 credit(s)
- COM 690 - Independent Study 1-6 credit(s)

Total: 36 credits

Media & Education, MA

Contact:
Michael Schoonmaker, Co-director, M&E; Chair, TRF, mschoon@syr.edu.315-443-2150
Jeffrey Mangram Co-director, M&E; Program Coordinator, Social Studies Education, jamangra@syr.edu
Description
This program brings together the fields of media and education, and is offered jointly by the School of Education and the S.I. Newhouse School of Public Communications. Using broad definitions, we see media as an umbrella term for a range of forms that communicate to a public and we define education as occurring in both formal settings like schools and informal arenas like popular culture. This program addresses media production and analysis in relation to visual storytelling, combining an analysis of core issues in education with visual storytelling creation and production skills. The program will also speak to the cultural terrain of how people both make and make sense of media.

Program Requirements

The MA degree explores areas such as:

- Media Education: educating teachers of media, including media literacy educators, community college professors, or those with an interest in film including licensed/certified K-12 teachers, in short those who want to bring the art of visual storytelling to educational settings.
- Youth Development: addressing the field of education that takes place outside schools. It includes youth development community projects and youth media organizations.
- Media Literacy: teach future educators of media literacy from a cultural studies perspective, which includes a tripartite focus on the text, the audience, and the political economy.
- Leadership in the Field: propelling some students to move on to doctoral studies and further research in the academy.

Admission:
The MA program will follow Syracuse University’s general guidelines for admission of graduate study. That is, applicants must present respectable evidence of excellence with depth and dimension in their records. The review committee expects to admit students with an exemplary transcript, extraordinary letters of recommendation, a personal statement that reflects potential growth, and a demonstrated experience in education and/or media studies.

Financial Support:
The program will draw upon traditional graduate assistantship awards and scholarships. Furthermore, numerous scholarships are awarded to students whose backgrounds may have placed them at a disadvantage in academic and professional fields.

Learning Outcomes:
The program has three goals:

- To teach students how to understand, interpret and demystify media and popular culture.
- To have them create media in relation to education, broadly conceived.
- To understand the social and political contexts of media in relation to education.

Requirements:
Note: This program requires full time study except for the second summer session which requires only 3 credits.

First summer - Summer Session II
Summer Institute (7 Credits):
- TRF 655 - Screenwriting and Production Workshop 3 credit(s)
- EDU 603 - Introduction to Qualitative Research 3 credit(s)
- M&E 610 - Media and Education Master’s Colloquium 1 credit(s)
This colloquium will create community and introduce students to legal, cultural and institutional issues in this field.

Fall Semester (13 Credits):
The visual media electives expose students to both old and new visual media, focusing in both courses on storytelling skills. The educational courses engage students on how educational projects are culturally situated. The colloquium during this semester emphasizes the development of an idea for the capstone project.
- M&E 610 - Media and Education Master’s Colloquium 1 credit(s)

Cultural Foundations Elective - (3 credits) One course from:
- CFE 605 - Race, Philosophy and Education 3 credit(s)
- CFE 614 - Critical Issues in Dis/Ability and Inclusion 3 credit(s)
- CFE 631 - Introduction to Sociology and Anthropology of Education 3 credit(s)
- CFE 776 - Gender, Education & Culture 3 credit(s)

Visual Media Elective I - (3 credits) One course from:
- COM 600 - Selected Topics 1-6 credit(s)
- ICC 565 - Designing Interactivity 3 credit(s)
- TRF 642 - Television Production Workshop 3 credit(s)
- TRF 648 - Producing Radio: On Air to Online 3 credit(s)
- TRF 651 - Filmmaking 3 credit(s)
- TRF 653 - Short-form Production 3 credit(s)
- TRF 654 - Music Recording 3 credit(s)
- TRF 656 - Sound for Picture 3 credit(s)
- TRF 659 - Documentary Production 3 credit(s)

Education Elective - (3 credits) One course from:
- EDU 610 - The American School 3 credit(s)
- CFE 621 - History of Education in the United States 3 credit(s)
- CFE 640 - Inequality and Intergroup Relations in Education 3 credit(s)
- CFE 775 - Gender, Sexuality, and Disability 3 credit(s)
- DSP 930 - Sociology and Anthropology of Education: Seminar in Special Topics 3 credit(s)
- IDE 651 - Message Design for Digital Media 3 credit(s)
- IDE 652 - Assistive Technologies for Integrating Students with Special Needs 3 credit(s)
- RED 607 - Issues in Multicultural Literacy 3 credit(s)
- EDU 778 - Narrative Inquiry in Research and Creative Practice 3 credit(s)

Public Communications Elective - (3 credits) One course from:
NOTE: Students are invited to petition public communications electives not on this list along with a rationale for using them in their program of study.
- COM 646 - Media and Diversity 3 credit(s)
- COM 755 - Communications Theory 3 credit(s)
- TRF 640 - Topics in Critical and Historical Perspectives 3 credit(s)
- TRF 683 - Communications Industry Frontiers 3 credit(s)

Spring Semester (13 Credits):
The colloquium focuses on the research and design of the summer capstone projects.
- M&E 610 - Proseminar in Media and Education 3 credit(s)

Culture Study Elective - (3 credits) One course from:
This 36-credit program leads to a Master of Arts in Media Studies.

Requisite
Three credits of undergraduate or graduate coursework in media skills. Extensive professional experience can be substituted by petition.

Required Courses
- COM 601 - Thesis Design 3 credit(s)
- COM 605 - Quantitative Methods for Mass Communications Research 3 credit(s)
- COM 606 - Qualitative Methods for Mass Communications Research 3 credit(s)
- COM 698 - Media Law 3 credit(s) or
- TRF 637 - Telecommunications Law&Policy 3 credit(s)
- COM 701 - Proseminar for Graduate Study 0 credit(s)
- COM 755 - Communications Theory 3 credit(s)

Perspectives In Communications Course (Choose Three)
- ADV 645 - The Power and Peril of Global Persuasion 3 credit(s)
- COM 600 - Selected Topics 1-6 credit(s)
- COM 646 - Media and Diversity 3 credit(s)
- COM 688 - Origins of Contemporary Media Issues 3 credit(s)
- COM 740 - Topics in Research Communication 3 credit(s)
- COM 777 - Seminar in Media Effects 3 credit(s)
- COM 788 - Theories of Media Content 3 credit(s)
- ICC 617 - Issues in Media Management 3 credit(s)
- MNO 601 - Principles: Business, History, and the Ethics of Journalism 3 credit(s)
- TRF 592 - Film Business 3 credit(s)
- TRF 594 - Television Business 3 credit(s)
- TRF 595 - Programming and Audience Analysis 3 credit(s)
- TRF 600 - Selected Topics 1-6 credit(s)
- TRF 636 - Critical and Historical Perspectives on Television, Radio, and Film 3 credit(s)
- TRF 683 - Communications Industry Frontiers 3 credit(s)

Electives 9 Credits (Choose Three)
Elective courses will be selected in consultation with the student's advisor from the broad range of graduate offerings in the Newhouse School and the University at large.

Thesis (3 Credits)
Total: 36 credits

New Media Management, MS

Contact:
Stephen Masiclat, Director
255A Newhouse 3, 315-443-9243.

Newhouse faculty:
See faculty listings for the S.I. Newhouse School of Public Communications.

Management faculty:
See faculty listings under M.B.A. program in the Martin J. Whitman School of Management.

Program Requirements
This program focuses on the management, finance, and marketing functions of the communications industry. The Master of Science degree in new media management is granted jointly by the S.I. Newhouse School of Public Communications and the Martin J. Whitman School of Management. The required number of graduate credits varies from 36 to 42, depending upon the student’s prior academic background.

This 36-credit program leads to a Master of Science (M.S.) in New Media Management.

Requirements of the Newhouse School of Public Communications

Required Courses
- COM 698 - Media Law 3 credit(s) or
- TRF 637 - Telecommunications Law&Policy 3 credit(s)
- ICC 606 - Applied Research in Content Management 3 credit(s)
- ICC 617 - Issues in Media Management 3 credit(s)
- ICC 625 - New Media Business 3 credit(s)
- ICC 683 - Case Studies in Media Management 3 credit(s) or
- TRF 683 - Communications Industry Frontiers 3 credit(s)

Capstone
- ICC 689 - New Media Management Capstone 6 credit(s)

Requirements of the Martin J. Whitman School of Management

Total: 36 credits
Whitman School of Management

Required Courses

- EEE 643 - Emerging Enterprise Consulting 3 credit(s) or
- MAR 745 - Strategic Brand Management 3 credit(s)
- MBC 603 - Creating Customer Value 1.5 credit(s)
- MBC 604 - Managing the Marketing Mix 1.5 credit(s)
- MBC 607 - Understanding Financial Statements 1.5 credit(s)
- MBC 609 - Accounting for Managerial Decisions 1.5 credit(s)
- MBC 618 - Competitive Strategy 1.5 credit(s)
- MBC 619 - Corporate Strategy 1.5 credit(s)
- MBC 639 - Leadership in Organizations 3 credit(s)

Additional Information

Students without prior background in communications must complete an additional 6 credits in Newhouse course-work chosen in conjunction with the program director.

Total: 36-42 credits

Photography, MS

Contact:

Bruce Strong, Chair, 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 graduate program in communications photography is for advanced students who wish further study in a specialized area. The program places strong emphasis on multimedia storytelling principles and technology. To augment the emphasis on visual communication, the program also includes communications research and/or theory for photojournalism and other communications fields, such as advertising and illustration photography.

This 30-33 credit program leads to a Master of Science (M.S.) in Photography.

Admission

All students admitted to the program must have backgrounds in communications-style photography. A portfolio is required and should be sent separately to Professor Bruce Strong.

Chair, Department of Multimedia Photography and Design, Newhouse School, 215 University Place, Syracuse NY 13244. Images should be presented on a CD/DVD in jpeg or Photoshop format at 10" x 100 dpi.

Program Option A: Thesis

Required Courses

- COM 997 - Masters Thesis 1-6 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)
- PHO 608 - Problems in Photography 3 credit(s)

Photography (choose one)

- PHO 604 - Advertising and Illustration Photography II 3 credit(s)
- PHO 625 - Picture and Multimedia Editing 3 credit(s)

Mass Communications and Society (choose one)

- COM 605 - Quantitative Methods for Mass Communications Research 3 credit(s)
- COM 698 - Media Law 3 credit(s)
- COM 755 - Communications Theory 3 credit(s)

Photo Electives

6 credits from graduate-level photography courses.

General Electives

6 credits of graduate coursework.

Additional Information

Students who elect to write a thesis should have an idea for a topic early in the program. The thesis may be creative, historical, scientific, or statistical in nature.

Program Option B: Special Project

Required Courses

- COM 605 - Quantitative Methods for Mass Communications Research 3 credit(s) or
- COM 755 - Communications Theory 3 credit(s)
- COM 698 - Media Law 3 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)
- PHO 608 - Problems in Photography 3 credit(s) or
- PHO 609 - Problems in Photography 3 credit(s)

Photography (choose one)

- PHO 604 - Advertising and Illustration Photography II 3 credit(s)
- PHO 625 - Picture and Multimedia Editing 3 credit(s)

Additional Information

In addition to the above courses, the student must submit a proposal to the faculty for a major photographic project. After approval and successful completion of this project along with the above coursework, the faculty will recommend the candidate to the Graduate School for the Master's degree.

Total: 30-33 credits

Public Relations, MS

Contact:

Rochelle L. Ford, Chair
318 Newhouse 3, 315-443-9347

Faculty

Rochelle L. Ford, Anthony D’Angelo, William Jasso, Hua Jiang, Dennis F. Kinsey, Joon Soo Lim, Steven Pike, Maria P. Russell

The internationally recognized public relations program at the S.I. Newhouse of Public Communications is one of the few programs in the country that offers public relations education at the undergraduate, Master's, and mid-career levels. In addition to the Master's program described below, please note that the Newhouse School offers a distance-learning Master's program in Communications Management and a joint Master's program in Public Diplomacy, resulting in degrees in Public Relations and in International Relations. Information about these programs can be found under Academic Offerings.

The 36-credit program in Public Relations is an intensive thirteen months of professional study primarily for recent college graduates seeking entry into the field of public relations. The program also enrolls public relations practitioners with fewer than five years of experience who are seeking to renew and refine their skills. In either case, Master's degree students have the opportunity to explore in depth both the theoretical underpinnings of the profession and to apply best practices. The program is distinguished by its many fine alumni both nationally and abroad, working and teaching in the full spectrum of public relations specialties.

Students choose between two tracks: one that leads to a career in the practice of public relations, the other to advanced study in preparation for a teaching and/or research career.
The professional track is completed by a capstone examination and internship. The thesis track is completed by a thesis.

This 36-credit program leads to a Master of Science (M.S.) in Public Relations.

**Professional Track**

**Requirements**

- COM 698 - Media Law 3 credit(s)
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)
- MBC 607 - Understanding Financial Statements 1.5 credit(s)
- MBC 627 - Financial Markets and Institutions 1.5 credit(s)
- PRL 525 - Public Relations Practicum 3 credit(s)
- PRL 604 - Writing for News and Public Relations 3 credit(s)
- PRL 605 - Public Relations Theory 3 credit(s)
- PRL 611 - Public Relations Research 3 credit(s)
- PRL 614 - Advanced Public Relations Writing for Digital Platforms 3 credit(s)
- PRL 615 - Public Relations Campaign Planning & Execution 3 credit(s)
- PRL 725 - Public Relations Management 3 credit(s)

**Additional Information**

Two required research and theory electives chosen with adviser (6 credits)

**Thesis:**

- COM 997 - Masters Thesis 1-6 credit(s)

**Thesis track total: 36 credits**

**Television, Radio and Film, MA**

**Contact:**

Michael Schoonmaker, Chair
318 Newhouse 3, 315-443-2150

**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

Established in 1950, the Television, Radio and Film Master’s program was the first of its kind in the nation and continues to be seen as the leader in graduate education for the field. This one-year, intensive, graduate program is designed for those who want to tell stories for screens of all sizes, examining various forms of entertainment media through the lenses of storytelling, industry, technology and art form.

Every day we experience these entertainment media as commercials on television, our favorite films at the multiplex, games on our iPhones and videos on the Internet. Students in the Television-Radio-Film Department have the opportunity to explore the ways stories are currently told, but also how they might be told decades from now as new technologies develop and the world shrinks.

Major themes in coursework include: production, screenwriting, criticism, business management and trends, the creative process and entrepreneurial strategies in dynamic media environments. The department's approach to story is framed within film, television, Internet, interactivity and audio. You will create, analyze and explore. You may choose to learn screenwriting, to produce a documentary, to create a web-based public service campaign—and then research your audience and market your creation. Your one year as a student in this program will be multidimensional in terms of its practical, theoretical, forward-thinking, creative, industry-centered and intellectual layers.

This multidimensional approach is most visible in the Proseminar Industry Series (spanning across the year of study) designed to bring together TRF students and professional practices. The object of the Proseminar experience is to prepare students to engage in current TRF issues and practices, help them understand changes in media environments and enable them to respond to future challenges as skilled creators and decision-makers.

The TRF Master's prepares future leaders in enterprises where stories for screens entertain and persuade audiences: as writers, directors, editors, producers, media executives, multimedia designers, managers, entertainment lawyers, and agents. Some graduates run their own businesses, while others work for organizations like PBS, Comcast-NBC Universal, Google, MTV, Discovery Networks, Time Warner, Disney, Nickelodeon, CAA and hundreds of others.

This 36-credit program leads to a Master's of Art (M.A.) in Television, Radio and Film.

**Requirements (19-21 Credits)**

- TRF 610 - Proseminar in Television, Radio, and Film 1 credit(s) (Phase I, II, and III--1 credit each)

Note: Proseminar includes an optional industry-immersion trip to New York City or Los Angeles during winter break.

- TRF 635 - Industry Forces 3 credit(s)
- TRF 636 - Critical and Historical Perspectives on Television, Radio, and Film 3 credit(s)
- TRF 637 - Telecommunications Law & Policy 3 credit(s)
- TRF 655 - Screenwriting and Production Workshop 3 credit(s)
- TRF 675 - Entertainment Industry Practicum 1-3 credit(s)
- TRF 696 - Research for Entertainment Media 3 credit(s)

**TRF Electives (15-17 Credits)**

TRF Master's students tailor their individual programs to fit their unique learning goals with specialized coursework from a list of more than 65 courses. Among those are the following:

- TRF 510 - Specialized Practice 1 credit(s)
- TRF 530 - Popular Culture Studies 3 credit(s)
- TRF 560 - Topics in International Perspectives 3 credit(s)
- TRF 592 - Film Business 3 credit(s)
- TRF 594 - Television Business 3 credit(s)
- TRF 595 - Programming and Audience Analysis 3 credit(s)
- TRF 600 - Selected Topics 1-6 credit(s) - Animation and Visual Effects: 2D
- TRF 600 - Selected Topics 1-6 credit(s) -
Mass Communications, PhD

Contact:
Dennis Kinsey, Director of Doctoral Studies
454 Newhouse 3, 315-443-3372, masscomm@syr.edu

Faculty:
See Faculty listing for the S.I. Newhouse School of Public Communications

The Ph.D. in mass communications in the S.I. Newhouse School of Public Communications is rooted in the social and behavioral sciences and is an interdisciplinary degree, with doctoral students taking classes outside the Newhouse School and developing at least one outside area of expertise. Students may draw on an extensive variety of faculty in other schools at Syracuse University.

Students can specialize in the functions and social effects of print and electronic media or focus on media-related institutions in society. Among the topics they might consider are: influences on media content, media influence on social behavior, new communications technologies, advertising influences on consumer behavior, public relations, media law and ethics, diversity and the media, science communication, and political communication.

Coursework includes four areas of study: mass communication theory, research methods and statistics, courses related to the dissertation, and a substantive area outside the Newhouse School (e.g., sociology, psychology, political science, information studies).

Doctoral students complete at least 90 semester credits beyond the bachelor's degree. Of the 90 credits, at least 36 classroom credits must be earned in residence at Syracuse University. Doctoral students entering the program with master's degrees should be able to complete the program in three years.

Admission
Applicants with master's degrees will be given preference for admission to the Ph.D. program.

Required Areas of Study

Proseminar
- COM 701 - Proseminar for Graduate Study 0 credit(s)

Mass Communication Theory at least 15 credits, including:
- COM 755 - Communications Theory 3 credit(s)
- TRF 698 - Social Effects of Television 3 credit(s)
- COM 788 - Theories of Media Content 3 credit(s)

Research Methods and Statistics at least 15 credits, including:
- COM 605 - Quantitative Methods for Mass Communications Research 3 credit(s)
- two statistics courses

Two of the following courses:
- COM 700 - Selected Topics 1-6 credit(s) Advanced Research Methods-Experimental Design
- COM 700 - Selected Topics 1-6 credit(s) Advanced Research Methods-Qualitative Research
- COM 806 - Advanced Survey Research Methods 3 credit(s)
- COM 807 - Content Analysis Research Methods 3 credit(s)

Concentration #1
At least 15 credits of coursework in an academic area outside the Newhouse School.

Concentration #2
At least 15 credits of coursework in an area of interest to support the dissertation topic.

Dissertation (usually 18 credits).

Law and Arts Journalism, JD/MA

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A, as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees to be obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse
2 (315-443-4039; pcgrad@syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Advertising, JD/MA

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A. as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pcgrad@syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Magazine, Newspaper & Online Journalism, JD/MA

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A. as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pcgrad@syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Photography, JD/MS

Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A. as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees be obtained independently.

Joint degrees in communications prepare students for careers in communications law and journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443-4039; pcgrad@syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabbott@law.syr.edu).

Law/Public Relations, JD/
Degree Requirements:
The Juris Doctor/Master of Science or Master of Arts in communications are combined degrees which may be conferred by the S.I. Newhouse School of Public Communications and the College of Law. A student who is admitted to one of these programs has the opportunity to earn both the J.D. degree and the M.S. or M.A., as appropriate, in a variety of communications fields in substantially less time than would be required were the two degrees obtained independently.

Joint degrees in communications prepare students for careers in communications law and media, public policy, journalism, and a variety of entertainment industries. Students may matriculate into one of a number of programs including advertising, arts journalism, documentary film and history, magazine, newspaper and online journalism, media studies, photography, public relations, and television, radio and film. The duration of the joint program in communications varies according to the program chosen and the student's prior coursework.

Questions and inquiries should be directed to the Graduate Records Office, S.I. Newhouse School of Public Communications, 330 Newhouse 2 (315-443- 4039; pcgrad@syr.edu) or visit newhousemasters.syr.edu. Students with general questions and inquiries concerning procedures regarding joint degrees should contact Courtney Abbott Hill, Associate Director for Student Life, Suite 220 College of Law (443-1146, cabboth@law.syr.edu).

Public Diplomacy, MS/MA
Contact:
Dennis F. Kinsey, Director
452 Newhouse 3, 315-443-3801
http://publicdiplomacy.syr.edu/

Faculty
See faculty listing under Public Administration and International Affairs in the Maxwell School of Citizenship and Public Affairs and under Public Relations in the S.I. Newhouse School of Public Communications.

The Maxwell School of Citizenship and Public Affairs and the S.I. Newhouse School of Public Communications offer a multidisciplinary graduate program leading to the Master of Arts (M.A.) degree in International Relations and the Master of Science (M.S.) degree in Public Relations. This dual-degree program is offered jointly by the Maxwell School's Department of Public Administration and International Affairs and the Newhouse School's Department of Public Relations. It is designed to train professionals to assume public communications responsibilities for governments, non-governmental organizations, and the private sector.

Program Requirements
Successful completion requires 58 credits of coursework. The program begins in early July with a summer-long gateway seminar, introducing students to the fields of public diplomacy, public communications, and their cross-disciplinary synthesis. During the fall and spring semesters, students take courses at the Maxwell and Newhouse Schools. The following summer, students complete an off-campus experience at one of several locations around the world. Students resume coursework in the second fall semester and finish the program that spring in Washington, D.C., where they complete a required internship and attend two special seminars addressing issues in public diplomacy and public communication at the Maxwell School’s home in Washington, DC, the Center for Strategic and International Studies. Graduation requirements include demonstrating proficiency in a foreign language.

Required courses at the S.I. Newhouse School of Public Communications

Communications
- COM 698 - Media Law 3 credit(s)

Graphic Design
- GRA 617 - Visual Communications Theory and Practice 3 credit(s)

Public Relations
- PRL 602 - Introduction to Public Diplomacy and Communications 3 credit(s)
- PRL 605 - Public Relations Theory 3 credit(s)
- PRL 607 - Advanced Public Diplomacy 3 credit(s)
- PRL 608 - Public Relations Writing 3 credit(s)
- PRL 611 - Public Relations Research 3 credit(s)
- PRL 615 - Public Relations Campaign Planning & Execution 3 credit(s)
- PRL 725 - Public Relations Management 3 credit(s)
- PRL 735 - Public Relations Practicum 3 credit(s)

Required Courses at the Maxwell School of Citizenship and Public Affairs

Public Administration and International Affairs
- PAI 706 - International Relations Capstone Seminar 1 credit(s)
- PAI 708 - Issues for 21st Century Public Diplomacy 3 credit(s)
- PAI 709 - Research Consultancy in Public Diplomacy 3 credit(s)
- PAI 710 - International Actors and Issues 3 credit(s)
- PAI 720 - Principles of Economics 3 credit(s)
- PAI 721 - Introduction to Statistics 3 credit(s)

Other Required Courses:
During their studies, students must complete a three-credit summer internship as well as six credits towards a distinct international relations career track, as well as one of the following five International Relations signature courses.
- PAI 707 - Culture in World Affairs 3 credit(s)
- PAI 716 - Economic Dimensions of Global Power 3 credit(s)
- GEO 606 - Development and Sustainability 3 credit(s)
- HST 645 - History of International Relations 3 credit(s)
- PSC 783 - Comparative Foreign Policy 3 credit(s)
Summer off-campus internship program (and career track course) 6 credits

Career Track Course 3 credits

Total: 58 credits

**Media & Education, CAS**

**Contact information for the CAS program:**
Michael Schoonmaker, Co-director, M&E; Chair, TRF, msschoon@syr.edu. 315-443-2150
Jeffrey Mangram Co-director, M&E; Program Coordinator, Social Studies Education, jamangra@syr.edu

**Description**
This program brings together the fields of media and education, and is offered jointly by the School of Education and the S.I. Newhouse School of Public Communications. Using broad definitions, we see media as an umbrella term for a range of forms that communicate to a public and we define education as occurring in both formal settings like schools and informal arenas like popular culture. This program addresses media production and analysis in relation to visual storytelling, combining an analysis of core issues in education with visual storytelling creation and production skills. The program also speaks to the cultural terrain of how people both make and make sense of media.

**Certificate Requirements**
The CAS program is designed for educators who want to learn more about public media-video, film, television, radio, music recording and incarnations of these forms on the web—both how to make media in order to tell stories (or to help their students tell stories) and how to analyze them to incorporate into their pedagogy. Students in the program will learn to increase their visual storytelling skills in order to make films about or help students document their lives and the issues they care about. Because assumptions about education, identity and difference are always visible in the documentary process, the program will also work with students on the assumptions they bring to filmmaking.

**Required Courses**
- TRF 606 - Visual Storytelling for Education 3 credit(s)
- CFE 662 - Youth, Schooling and Popular Culture 3 credit(s)
- M&E 601 - Media and Education CAS Colloquium 1 credit(s)
- M&E 621 - Media and Education Practicum: Project Development 3 credit(s)
- M&E 622 - Media and Education Practicum: Production 3 credit(s)
- M&E 650 - Special Projects Seminar 2 credit(s)

**Certificate Awarded:**
Certificate of Advanced Study in Media & Education

**Total Credits:** 15

**Transfer Credit:**
Transfer credit will be considered on a case-by-case basis, up to a maximum of 3 credits.

**Part-time Study:**
This program requires part time study. Three weeks of the program take place on campus, with course assignments for the on-campus courses, and the required project completed by the student at home. Their project work will consist of applications of concepts from studies in the program to educational objectives in learning environments they work in, i.e. making an educational video, integrating media into classroom pedagogy and documenting it, or documenting an educational problem through visual media in conjunction with students.

**Satisfactory Progress:**
3.0 (B or better) average in all courses.
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 Cremedes, 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; Director, Communications Management Independent Study Degree Program 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, Mercy 1992 Communications law, broadcast news writing and reporting, access to information

Aileen Gallagher, Associate 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; Endowed Chair of Public Communications M.S., Syracuse University, 1986 Filmmaking, documentary production, Bollywood and Indian cinema, media and human rights

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 Guttermann, 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; Director, Newhouse Center for Global Engagement M.A., Ohio University, 2009 Interactive design, crisis communications, interactive storytelling, global communications

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 Ph.D., 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, international 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 K. 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 O’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

Rebecca Ortiz, Assistant Professor, Advertising
Ph.D. University of North Carolina, Chapel Hill, 2012
Health communications, social marketing frameworks

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, Amherst 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

Steven Pike, Assistant Professor, Public Relations
M.A., U.S. Naval War College, 2011
Public diplomacy, strategic communications, and foreign policy

Les Rose, Professor of Practice, Broadcast and Digital Journalism
B.A. University of Nebraska, Lincoln, 2010
Broadcast news reporting, writing and producing, photojournalism

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
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, Professor, Advertising
M.A.T., Loyola Marymount University, 2007
Branding, advertising strategy, campaigns

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

Sheri 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
S.I. Newhouse School of Public Communications

Courses

Advertising

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 1x 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 1x 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.

ADV 600 - 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 601 - Introduction to Copy and Layout
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Students will be exposed to the entire creative process of writing and designing ads in order to develop their ability to judge, as future advertising managers, what comprises a strong ad campaign.
PREREQ: ADV 604, GRA 617

ADV 604 - Seminar in Advertising Practice and Leadership
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Examination of advertising with the modern business structure; corporation; agency and media relationships; analysis of creative, research, and planning aspects. Limited to graduate students who have had no general course in advertising.
PREREQ: ADV 611

ADV 607 - Writing for the Advertising Profession
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
The fundamentals of researching and developing advertising strategies for campaigns. Students will gain proficiency in professional and creative/persuasive writing used in internal and external communications by advertising managers. Advertising graduate students only.
PREREQ: ADV 611

ADV 609 - Advertising and Public Relations Research Design
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Crosslisted with: PRL 609
The theory and application of research methods to solve advertising and public relations communication problems.

ADV 610 - Topics in Specialized Practice
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Development of specific skills needed to work in the advertising business (agency, media seller or client side). Topics vary dependent on changes in the industry.
Repeatable 2 time(s), 9 credits maximum

ADV 611 - Strategic Principles and Practices
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
The fundamentals of strategic planning as practiced in advertising including problem assessment, competitive analysis, target market profile, brand positioning, opportunity recognition, creative platform, and creative executions.

ADV 612 - Strategic Brain: Account Planning and Research
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Study the strategic findings of consumer research attuned to the emotions and thoughts of target audiences. Most importantly, students explore how to obtain key kernels of knowledge and emotion that will make advertising campaigns successful.
PREREQ: ADV 611

ADV 613 - Strategic Brain: Media Planning
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Learn how to create media plans including both traditional and digital advertising media vehicles. It’s a strategic and creative part of the entire brand-communications program that provides solutions on costs, coverage, effectiveness, and scheduling.
PREREQ: ADV 611

ADV 615 - Creative Brain
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Gain a thorough understanding of how advertising ideas are developed and spread across a variety of media choices. Learn to build a bridge across the historic divide that separates account managers from their creative colleagues.
PREREQ: ADV 604 AND GRA 617

ADV 625 - Integrated Advertising Campaigns
S.I. Newhouse School of Public Communications
6 credit(s) Only during the summer
Apply the skills learned from the graduate course work and develop integrated advertising campaigns for real clients. Move from a thorough understanding of advertising to becoming an active practitioner of the craft, intensive and hands-on experience.
PREREQ: ADV 604

ADV 645 - 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 345
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.

**Arts Journalism**

**AJP 601 - Issues for Arts Journalists**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
The arts and popular culture in the mass media, the economics and economic impact of the arts, legal issues, how nonprofit organizations function, and current aesthetic trends. The presentation and reception of various arts in contemporary society.

**AJP 602 - Arts Reporting**  
S.I. Newhouse School of Public Communications  
3 credit(s) Only during the summer  
Research skills, assessment of information, interviewing, economics of nonprofits, interpreting data. Issues such as copyright, public art policy, the arts and urban redevelopment. Introduction to local culture scene.

**AJP 606 - Feature and Critical Writing**  
S.I. Newhouse School of Public Communications  
3 credit(s) At least 1x fall or spring  
Writing intensive with focus on news judgment, story-telling and fluency in forms of arts journalism. Professional publication expected. Encompassing all forms of culture.  
PREREQ: AJP 602

**AJP 611 - Literature of Arts Journalism**  
S.I. Newhouse School of Public Communications  
3 credit(s) At least 1x fall or spring  
Reading, analyzing and discussing examples of arts journalism. Includes architecture, film, music, theater, pop culture, TV, visual arts, and more. Emphasis on contemporary forms.

**AJP 615 - Cultural Issues I**  
S.I. Newhouse School of Public Communications  
1 credit(s) At least 1x fall or spring  
Readings and discussions of news and current issues in the arts. Cross-discipline presentations by scholars and artists. Skill seminars in online writing and branding.

**AJP 616 - Cultural Issues II**  
S.I. Newhouse School of Public Communications  
1 credit(s) At least 1x fall or spring  
Readings and discussions of news and current issues in the arts. Cross-discipline presentations by scholars and artists. Skill seminars in preparing story pitches and working with editors.  
PREREQ: AJP 615

**AJP 621 - Practicum: NYC Arts**  
S.I. Newhouse School of Public Communications  
1 credit(s) At least 1x fall or spring  
Immersion trip to New York City includes performing arts events, visits to museums and galleries, meetings with media and arts professionals. Workshop with arts editors; writing arts reviews, and online blogging with multi-media work.

**AJP 631 - Capstone Arts Writing Workshop**  
S.I. Newhouse School of Public Communications  
6 credit(s) Only during the summer  
Capstone experience for graduate Arts Journalism majors. Students will research, write, and revise substantive works of arts journalism in workshop environment.  
PREREQ: AJP 601, AJP 611, AJP 621

**Broadcast and Digital Journalism**

**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 1x 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 BDJ 663 OR BDJ 664  
Repeatable 1 time(s), 6 credits maximum

**BDJ 560 - Television News Magazine Production**  
S.I. Newhouse School of Public Communications  
1 credit(s) Irregularly  
Students 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) Irregularly  
Planning 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

**BDJ 600 - 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 611 - Writing for Broadcast and Digital News**  
S.I. Newhouse School of Public Communications  
3 credit(s) Only during the summer  
Basic techniques of writing broadcast and digital news stories. Emphasis on learning to write radio, web and television stories under deadline pressure. Interviewing and information gathering are also studied.  
COREQ: BDJ 663

**BDJ 636 - Critical and Historical Perspectives on Broadcast Journalism**  
S.I. Newhouse School of Public Communications  
2 credit(s) At least 1x fall or spring
History, economics, and traditions of broadcast journalism with particular emphasis on contemporary ethical challenges. Must be enrolled in the BDJ master's program.

**BDJ 663 - News Reporting I**
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
News reporting, writing for broadcast and web, and newscast production using audio as the principal technology. Students cover real news stories on deadline, using state-of-the-art digital audio editing equipment.
COREQ: BDJ 611

**BDJ 664 - News Reporting II**
S.I. Newhouse School of Public Communications
4 credit(s) At least 1x fall or spring
Gathering and reporting news on deadline using electronic means. Involves shooting video, video editing, reporting, and writing for broadcast and Web. Taped and live performance are both emphasized.
PREREQ: BDJ 663

**BDJ 665 - News Producing & Presenting**
S.I. Newhouse School of Public Communications
6 credit(s) Only during the summer
Students produce television newscasts and file stories to a website. Students rotate in positions including producers (newscast and web), writers, editors, anchors, sports, and weather. The newscasts are delivered on a professional news set.
PREREQ: BDJ 667

**BDJ 667 - News Reporting III**
S.I. Newhouse School of Public Communications
4 credit(s) At least 1x fall or spring
Planning and production of longer news-related program segments of professional quality. Writing, research, and execution of mini-documentaries, enterprise reports and multi-media web stories.
PREREQ: BDJ 664

**BDJ 668 - Newsroom Operations**
S.I. Newhouse School of Public Communications
2 credit(s) Irregularly
How newsrooms cover and present daily news. Technical and editorial issues facing reporters, producers, and managers, featuring broadcast industry guest speakers and internships at television stations across upstate New York.
PREREQ: BDJ 663

**BDJ 675 - Washington Professional Experience**
S.I. Newhouse School of Public Communications
4 credit(s) Only during the summer

The D.C. experience is a capstone course for Broadcast and Digital Journalism graduate students. Its key elements are a substantive internship in the D.C. area and seminars with top journalists and high-level government officials.
PREREQ: BDJ 665

**Communications**

**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.

**COM 600 - 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 601 - Thesis Design**
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
All aspects of designing master's thesis research. Students write proposals that include introductory, literature review, and methodology chapters. Practical matters associated with successful completion of a thesis. Minimum of 18 credits completed in the Media Studies program.

**COM 605 - Quantitative Methods for Mass Communications Research**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Philosophical and practical implications of quantitative research. Application of survey research, experiments and content analysis to mass communications research. Statistical analysis and use of statistical software. Students conduct primary research.

**COM 606 - Qualitative Methods for Mass Communications Research**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Philosophical and practical implications of qualitative research. Application of textual analysis, in-depth interviews, and focus groups to mass communications research. Analysis of qualitative data and writing of research results. Students conduct primary research.

**COM 617 - Multimedia Storytelling**
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Students write and produce short fiction and non-fiction video stories using digital media. Emphasis on storytelling and story structures. Projects will be incorporated into websites and promoted with social media.

**COM 627 - Social Media for Communicators**
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Course 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 637 - Historical Methods in Mass Media**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Seminar in media problems explored via qualitative-historiographic research techniques. For students preparing theses, planning for research and teaching, or planning specialized careers in investigative reporting.

**COM 646 - Media and Diversity**  
S.I. Newhouse School of Public Communications  
3 credit(s) At least 1x fall or spring  
Analysis of contemporary media processes as they relate to race, ethnicity, class, gender, and sexual orientation.

**COM 647 - Applied Media Research**  
S.I. Newhouse School of Public Communications  
3 credit(s) At least 1x fall or spring  
Application of communications research techniques to specific problems of broadcasting, advertising, newspapers, magazines, and public relations. Individual and group projects.

**COM 660 - Readings/Mass Communications**  
S.I. Newhouse School of Public Communications  
1-3 credit(s) Upon sufficient interest  
Reading course for master's candidates. Close supervision by instructor. Required for all first-year Ph.D. and media studies students. Topics to include academic integrity, research resources, faculty research. Specific focus to vary annually.

**COM 670 - Experience Credit**  
S.I. Newhouse School of Public Communications  
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. Permission in advance with the consent of the department chairperson, instructor, and dean. Limited to those in good academic standing.

**COM 688 - Origins of Contemporary Media Issues**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Historic origins and development of current issues in mass communications, involving the structure and function of the media.

**COM 690 - Independent Study**  
S.I. Newhouse School of Public Communications  
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.

**COM 698 - Media Law**  
S.I. Newhouse School of Public Communications  
3 credit(s) Every semester  
Problems in media law, including libel, privacy, fair trial/free press, obscenity.

**COM 700 - 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.

**COM 701 - Proseminar for Graduate Study**  
S.I. Newhouse School of Public Communications  
0 credit(s) At least 1x fall or spring  
Required for all first-year Ph.D. and media studies students. Topics to include academic integrity, research resources, faculty research.

**COM 740 - Topics in Research Communication**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Problems that grow out of experiences of professional workers in communications, or problems that will prepare students for work in highly specialized fields. Particularly for students who have had NEW 615.

**COM 746 - Techniques of Communications Research**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Concepts and techniques of communications research. How the techniques developed and how they have been applied. Newspaper, magazine, and public relations fields.

**COM 755 - Communications Theory**  
S.I. Newhouse School of Public Communications  
3 credit(s) At least 1x fall or spring  
Application of information theory to mass communications problems. Nature of the communications process in groups and between mass media and audiences. Contribution of theoretical concepts to solving specific problems.

**COM 777 - Seminar in Media Effects**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Course examines research and theory on media effects as well as problems associated with conducting effects research. Focus is primarily on social scientific approaches to media effects. Students are expected to conduct original research.

**COM 788 - Theories of Media Content**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Influences on media content over five levels of analysis: individual, media routines, organizational, social institutions, and social systems. Seminar participants are responsible for leading discussions and writing a theoretical paper.

**COM 800 - 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.

**COM 806 - Advanced Survey Research Methods**  
S.I. Newhouse School of Public Communications  
3 credit(s) Irregularly  
Seminar provides hands-on experience with a telephone survey and discussion of other survey methods. Students design their research studies, using data collected from the common survey, and write quantitative research papers.

**COM 807 - Content Analysis Research Methods**  
S.I. Newhouse School of Public Communications  
3 credit(s) Odd academic yr e.g. 2007-8  
Quantitative content analysis designs and methods. Students are required to propose and complete a quantitative research paper. Students are encouraged to submit their papers to academic conferences.

**COM 990 - Readings: Doctorate**  
S.I. Newhouse School of Public Communications  
1-6 credit(s) Upon sufficient interest  
Undifferentiated program for individualized study for students working for doctorate.

**COM 997 - Masters Thesis**  
S.I. Newhouse School of Public Communications  
1-6 credit(s) Every semester  
Repeatable

**COM 999 - Dissertation**  
S.I. Newhouse School of Public Communications  
0 credit(s) Irregularly  
Coverage examination of the standard curriculum and faculty research. Required for all first-year Ph.D. and media studies students. Topics to include academic integrity, research resources, faculty research.
1-18 credit(s) Every semester
Repeatable 17 time(s), 18 credits maximum

**Documentary Film and History**

**DFH 600 - Selected Topics in Documentary Film and History**
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

**DFH 610 - Documentary Production Research**
S.I. Newhouse School of Public Communications
1 credit(s) Every semester
Analyzes the unique collaborative nature of the documentary through screenings of important work in the genre, readings and lectures by visiting professionals. Students design research strategies and write proposals for a Documentary Film and History thesis.
Repeatable 2 time(s), 3 credits maximum

**DFH 693 - Oral History Workshop**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1 x fall or spring
Crosslisted with: HST 693
Examines the practice of oral history from methodological and theoretical levels, the differences between individual and collective memories, and its application to analysis of events, ethical dimensions, and technological tools.

**DFH 695 - Historical Narratives and Interpretation**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1 x fall or spring
Crosslisted with: HST 695
Comparison and exploration of the documentary and the written word as alternative formats for presenting history. Documentaries and historical writings are examined and discussed using case studies.

**Graphic Design**

**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.

**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 GRA 617

**GRA 550 - Workshop in Typography**
S.I. Newhouse School of Public Communications
1-3 credit(s) Irregularly
Typographic 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 GRA 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 GRA 617

**GRA 567 - Graphic Design Problems**
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Double Numbered with: GRA 477
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 637 OR GRA 647

**Interactive Communications Core**

**ICC 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

**ICC 505 - Web Journalism and Innovation**
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Collaborate 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 BDJ 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
Crosslist 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 528 - Multimedia Projects
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Students design and script an interactive storytelling project that includes photos, videos, sound, text, graphics, and database information, which then will be prepped for publication intended for mobile device.

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 computer-based delivery.

ICC 575 - Advanced Web Design
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Students learn and apply theories of interactive writing interactive multimedia applications. This course builds on mark-up frameworks to create advanced interactions and dynamic content updates.

PREREQ: ICC 306

ICC 602 - Introduction to Digital Communications
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
This course will examine the evolving nature of digital communications as it relates to the media. Students will evaluate the use and impact on the creation, dissemination and consumption of news and information.

ICC 605 - Writing for New Media
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Introduction to conceptualizing, planning, and writing interactive multimedia applications. Students learn and apply theories of interactive design for planning creative and technical documents and study the development process for client-driven CD-ROM and web projects.

ICC 606 - Applied Research in Content Management
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: ICC 306
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 612 - Digital Communications Systems
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Introduction to the strategic digital communications systems that allow communications professionals to select audiences, deliver appropriate content over various channels, and capture data to better understand end users.

ICC 617 - Issues in Media Management
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
Intensive reading course where students explore key economic, legal and technological forces changing media businesses.

ICC 622 - Digital Communications Strategy and Entrepreneurship
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Students will complete a project plan demonstrating mastery of the concepts and practices from their previous coursework, and integrating these into a comprehensive solution for a complex and large-scale digital media communications problem.

ICC 625 - New Media Business
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
The forces and drivers that shape the corporate structures, strategies, products, services, costs, and revenue in offline and networked New Media. Students apply traditional and evolving business principles to develop entrepreneurial new media business plans.

PREREQ: ICC 601, ICC 605

ICC 632 - Media Industry Leadership and Change
S.I. Newhouse School of Public Communications
1.5 credit(s) Every semester
Each immersion focuses on a topic that is relevant to its location and to the mass media and communications industries. Guest speakers and presenters will include leaders from top communications organizations and new media startups worldwide.
Repeatable 1 time(s), 3 credits maximum

ICC 635 - New Media Culminating Experience
S.I. Newhouse School of Public Communications
6 credit(s) Irregularly
Students work full-time in a professional setting, with online discussions, assigned readings and a final project. Student must have completed 30 hours toward New Media Master's degree.

ICC 683 - Case Studies in Media Management
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Students conduct advanced business analysis and consulting for various media companies. Emphasis on NYC media companies.
PREREQ: ICC 606 AND ICC 625

ICC 689 - New Media Management Capstone
S.I. Newhouse School of Public Communications
6 credit(s) Only during the summer
Culminating experience for students in New Media Management Program. Students will deepen their knowledge of concepts studied and skills developed during previous year. In this capstone, students participate in a management project at a media business.

ICC 695 - Proseminar on New Media
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
The perspectives of new media professionals and the industries in which they work. Students will develop the theoretical groundwork and documentation for their capstone projects.
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

**MNO 601 - Principles: Business, History, and the Ethics of Journalism**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring

Journalism principles and ethics case studies in multiplatform media (magazine, newspaper, online), examined and debated in the context of history and the current business environment.

**MNO 606 - Magazine Article Writing**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring

Writing and selling basic types of magazine articles: ideas, slanting, research, organization, dealings with editors. Students write one full-length article. Additional work required of graduate students.

**MAG 500 - Selected Topics**
S.I. Newhouse School of Public Communications
1-6 credit(s) Irregularly

Explore 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.

**MAG 529 - Writing and Editing for Magazine Websites**
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly

Everything 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.

**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.

**MNO 607 - Multiplatform Reporting and Writing**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring

Reporting and writing using the beat system. Creating content for different publications, including newspapers, magazines, and websites. Packaging text and multimedia.

**MNO 629 - Magazine Management**
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring

Creating a prototype and business plan for a start-up magazine, including reporting, writing, editing, and designing a launch issue. Class works in teams and concludes with a pitch of each idea.

**MNO 631 - Journalism Enterprise**
S.I. Newhouse School of Public Communications
3-6 credit(s) Only during the summer

Capstone experience for graduate magazine, newspaper, and online journalism students. Students work on a professional digital project, secure an approved internship and write a 30-page research paper, or pursue a combination of project and internship.

**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
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 604

MPD 626 - Multimedia and Photojournalism Capstone
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: MPD 426
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.

MPD 678 - Graphic Design Capstone
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Double Numbered with: MPD 478
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.

MPD 690 - Independent Study
S.I. Newhouse School of Public Communications
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

Newspaper and Online Journalism

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

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 1x 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 BDJ 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 BDJ 664 OR MNO 617
Repeatable 2 time(s), 3 credits maximum

NEW 600 - 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 605 - News Writing and Reporting
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
Gather news and information for storytelling on multiple platforms: reporting, writing for print, introduction to taking photos, shooting video, capturing audio, using social media. Learn traditions, responsibilities of a free press, ethics, plagiarism, libel.

NEW 608 - Principles of Journalism
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Theoretical, historical background. Social functions; economics; ethics. Daily, community, alternative press magazines. Online operations.

NEW 635 - Newsroom Practicum
S.I. Newhouse School of Public Communications
6 credit(s) Irregularly
News gathering, writing, and editing practice and analysis using the Syracuse area as a news laboratory.

PREREQ: NEW 508, NEW 617

Photography

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 1x 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 1x 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 580 - International Course
S.I. Newhouse School of Public Communications
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

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.
Repeatable

PHO 603 - Advertising and Illustration Photography I
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
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.
Repeatable

PHO 604 - Advertising and Illustration Photography II
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: PHO 404
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 603/PHO 403

PHO 605 - Photojournalism and Multimedia
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: PHO 405

PHO 606 - Problems in Photography
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Advanced problems and projects in various areas of photography. Permits student to concentrate on specific areas of interests.

PHO 607 - Advanced Color
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Advanced techniques, aesthetics, and communication in the color medium.

PHO 608 - Problems in Photography
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Advanced problems and projects in various areas of photography. Permits student to concentrate on specific areas of interests.

PHO 609 - Problems in Photography
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Advanced problems and projects in various areas of photography. Permits student to concentrate on specific areas of interests.

PHO 610 - Research in Photography
S.I. Newhouse School of Public Communications
1-3 credit(s) Irregularly
For advanced students to conduct technical and creative research.
Repeatable 5 time(s), 6 credits maximum

PHO 625 - Picture and Multimedia Editing
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: PHO 425
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 605

Public Relations

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 315 AND 325

PRL 530 - Special Topics in Public Relations
S.I. Newhouse School of Public Communications
1-3 credit(s) At least 1x 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

PRL 600 - 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 602 - Introduction to Public Diplomacy and Communications
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
A gateway course for the two-degree program on the theory and practice of public diplomacy. Fundamental topics in public relations and international relations will be explored.
PRL 604 - Writing for News and Public Relations
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Students learn the fundamentals of news writing and news media expectations, research and write various communications forms considered “the tools of the public relations trade,” including producing a professional “Webinar.” Public Relations introduction included.

PREREQ: PRL 604

PRL 605 - Public Relations Theory
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
This course covers theories of excellence in public relations by looking at models, roles, communication, organizational culture, diversity and ethics. A brief overview of communication theory included. Theories form the foundation for professional practice.

PREREQ: PRL 604

PRL 607 - Advanced Public Diplomacy
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
International public relations and public diplomacy, global media systems, international organizations and the intersection between strategic government communication, mass media, and global public opinion.

PREREQ: PRL 602

PRL 608 - Public Relations Writing
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Written communication expected of entry-level public relations/public diplomacy professionals, along with the basic understanding of how the media researches, writes, and reports the news.

PREREQ: PRL 602

PRL 609 - Advertising and Public Relations Research Design
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Crosslisted with: ADV 609
The theory and application of research methods to solve advertising and public relations communication problems.

PRL 611 - Public Relations Research
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring

PREREQ: PRL 604

PRL 614 - Advanced Public Relations Writing for Digital Platforms
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
This course builds on the students’ understanding of news writing and fundamental writing skills emphasized and developed in PRL 604 by introducing them to social media and writing for an online, digital world.

PREREQ: PRL 604

PRL 615 - Public Relations Campaign Planning & Execution
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Students apply strategic planning, research and tactics to client needs. Teams design, execute and evaluate appropriate integrated campaigns for actual clients. Frequent client/team interaction required. Campaign books produced are part of the student's professional portfolio.

PREREQ: PRL 605 AND PRL 611 AND PRL 614

PRL 625 - Seminar in Public Relations Management
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Special problems in a specific area of organizational public relations.

PREREQ: PRL 615

PRL 635 - Public Relations Culminating Experience
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Students work in a professional setting full-time for a minimum of eight weeks. Students are responsible for a Journal of observations, and a midpoint and final evaluations. PR master's student with 33 completed hours toward degree required.

PREREQ: PRL 615 AND PRL 725 AND PRL 525 AND COM 698 AND GRA 617

PRL 645 - The Ethics of Advocacy
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: PRL 345
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 725 - Public Relations Management
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Historical and current management theories and practices to apply to the public relations function. Students learn the responsibilities of managing a public relations department.

PREREQ: PRL 605, AND PRL 611 AND PRL 614

PRL 735 - Public Relations Practicum
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
A practicum in student internships in professional settings based on interest and career plans. Students will intern and create a portfolio of writing, graphics, and research samples. The course will also include a comprehensive exam.

PREREQ: COM 698, GRA 617, NEW 605, PRL 602, PRL 604, PRL 605, PRL 611, PRL 615, PRL 725

Television, Radio, and Film

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.

TRF 592 - Film Business
S.I. Newhouse School of Public Communications
3 credit(s) Every semester

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 1x 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.

TRF 600 - 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 605 - Audio Arts Practices
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
Introduction to the fundamental practices involved in the creation of effective audio for radio, music, television, film, and online media.

TRF 606 - Visual Storytelling for Education
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
Introduction to planning, designing, writing, and producing motion picture media for educational settings.

TRF 610 - Proseminar in Television, Radio, and Film
S.I. Newhouse School of Public Communications
1 credit(s) Every semester
Review of fundamental theories and questions in the field, with an emphasis on understanding the development of the discipline and implementations of practice, including film, television, radio, music, gaming, Internet, and mobile media. Repeatable 2 time(s), 3 credits maximum

TRF 611 - Dramatic Writing for Television and Film
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Preparing and writing scripted dramatic material for small and large screen. Script evaluation, working as a professional writer, and the stages of script development.

TRF 621 - Feature Film Writing
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 421
Study and practice of the craft of feature film writing. Additional work required of graduate students.

TRF 622 - Comedy Writing
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 422
Study and practice of the craft of comedy writing for television and film. Additional work required of graduate students.

TRF 624 - Script Development
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 424
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.

TRF 635 - Industry Forces
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Origins and dynamics of corporate structures, revenue models, content, distribution, and regulation in the television, radio, film, and interactive media industries.

TRF 636 - Critical and Historical Perspectives on Television, Radio, and Film
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer
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.

COREQ: TRF 655

TRF 637 - Telecommunications Law & Policy
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Introduction to the law and policies that influence the telecommunications industries. Covers the policy environment, historical, and current developments.

TRF 640 - Topics in Critical and Historical Perspectives
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 340
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 642 - Television Production Workshop
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 442
Students write, design, produce, direct, and program projects specifically for television presentation. Additional work required of graduate students.

TRF 648 - Producing Radio: On Air to Online
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 448
Intermediate study and practice in creating fictional and nonfictional radio content for broadcast and online distribution. Additional work required of graduate students.

TRF 650 - Advanced Practice: Special Projects
S.I. Newhouse School of Public Communications
1-3 credit(s) Irregularly
Double Numbered with: TRF 450
Faculty member works with student on project especially tailored for his/her unique content.
sound studios, production recording, signal processing, nonlinear editing and mixing. Additional work required of graduate students.

PREREQ: TRF 651 OR TRF 652 OR TRF 653 OR TRF 654 OR TRF 656 OR TRF 657 OR TRF 658 OR TRF 659

Repeatable 5 time(s), 6 credits maximum

TRF 651 - Filmmaking
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 451

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 655

TRF 653 - Short-form Production
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 453

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 655

TRF 654 - Music Recording
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 454

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.

PREREQ: TRF 655

TRF 655 - Screenwriting and Production Workshop
S.I. Newhouse School of Public Communications
3 credit(s) Only during the summer

Introduction to writing, designing, planning, and producing programs for radio, television, and film.

COREQ: TRF 636

TRF 656 - Sound for Picture
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 456

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.

PREREQ: TRF 655

TRF 657 - Music Underscoring
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 457

The theory and practice of producing music to underscore visual material. Additional work required of graduate students.

PREREQ: TRF 655

TRF 658 - Radio Practicum
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Double Numbered with: TRF 458

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.

PREREQ: TRF 655

TRF 659 - Documentary Production
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 459

Student teams write, produce, and edit documentary projects. Additional work required of graduate students.

PREREQ: TRF 655

TRF 661 - Advanced Management Seminar
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 461

Business of communications industry focusing on management skills and their effective application. Additional work required of graduate students.

PREREQ: TRF 592 OR TRF 594 OR TRF 595 OR TRF 683

TRF 662 - Advanced TV Production
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 462

Students produce six episode, scripted television series to demonstrate mastery of advanced television production practices. Additional work required of graduate students.

TRF 667 - Screenwriting Master Class
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 467

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.

PREREQ: TRF 651 OR TRF 652 OR TRF 653 OR TRF 654 OR TRF 656 OR TRF 657 OR TRF 658 OR TRF 659

TRF 668 - Advanced Audio
S.I. Newhouse School of Public Communications
3 credit(s) Irregularly
Double Numbered with: TRF 468

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: TRF 651 OR TRF 653 OR TRF 654 OR TRF 656 OR TRF 657 OR TRF 658 OR TRF 659

TRF 669 - Advanced Filmmaking
S.I. Newhouse School of Public Communications
3 credit(s) Every semester
Double Numbered with: TRF 469

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.

PREREQ: TRF 651 OR TRF 652 OR TRF 653 OR TRF 654 OR TRF 656 OR TRF 657 OR TRF 658 OR TRF 659

TRF 675 - Entertainment Industry Practicum
S.I. Newhouse School of Public Communications
1-3 credit(s) Only during the summer

Students work in a professional setting for a minimum of six weeks. Students are responsible for online participation in discussions, selected readings, written exercises, a journal of observations, and a research paper.

Repeatable 2 time(s), 3 credits maximum

TRF 683 - Communications Industry Frontiers
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring
Double Numbered with: TRF 483

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 696 - Research for Entertainment Media
S.I. Newhouse School of Public Communications
3 credit(s) At least 1x fall or spring

Understanding research practices in relation to
entertainment media questions and problems. Focus: teaching students to be critical consumers and evaluators of research. Students will apply research practices to questions of particular interest to them. Students who complete this course cannot take COM 605 or 606.

**TRF 698 - Social Effects of Television**  
*S.I. Newhouse School of Public Communications*

3 credit(s) Irregularly

Influence of mass media, especially television, on American society. Television from perspective of social psychology, child development, political science, and sociology.
The College of Visual and Performing Arts

Michael Tick, Dean
200 Crouse College
http://vpa.syr.edu/

About the College

The College of Visual and Performing Arts at Syracuse University 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.

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 six areas: School of Art, the School of Design, the Department of Drama, the Department of Transmedia, the Communication and Rhetorical Studies 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.

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.

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.

Graduate Studies Information

Graduate students in the College of Visual and Performing Arts benefit from an effective combination of studio, performance, and research activities. Faculty advisors carefully establish the parameters of each graduate student’s course of study and advance and facilitate interdisciplinary study. The aesthetic climate of the college supports and encourages the development of individual potential. In addition, the college recognizes the link between education, critical thinking, and cultural knowledge. Diversity and community are emphasized as important elements of every student’s program design.

The college’s graduate programs attract students of superior intellectual and creative ability from many distinguished institutions throughout the world. The faculty is composed of professional artists, designers, musicians, composers, actors, and scholars who are active and recognized in their fields. In addition, the college is committed to maintaining a regular influx of prominent visiting professionals.

Graduate Awards

Fellowships and Scholarships

Syracuse University provides University Graduate Fellowships on a competitive basis. These provide a competitive stipend for nine months of full-time study in addition to a tuition scholarship. See application materials for specific deadlines.

Assistantships

The College of Visual and Performing Arts may offer a teaching, technical, and/or administrative assistantship to qualified recipients, including first-year students. Assistantships offer valuable opportunities for students to enhance their professional credentials. Renewal of assistantships is based on superior performance in coursework and in assistantship assignments.

Tuition Scholarships

In addition to fellowships and assistantships, tuition scholarships in varying amounts are offered to outstanding students as evidenced by academic record and merit.

Scholarships

The college has a limited number of small scholarships to support graduate students. All scholarships are available to first-year students, and are based on merit.

Graduate Good Standing Status

To be a graduate student in good standing, students must comply with the Graduate Grading Standards, which consider passing grades as A, A-, B+, B, B-, C+, C, and C-. The D grade is not an option for graduate students. The minimum GPA for graduate work is 2.8 in the first 30 credits. Certification for an advanced degree requires a minimum average of 3.0 for work comprising the program for the degree and a 2.8 average for all credits earned. This information can be found in the Academic Rules and Regulations section of this catalog.

Specific programs in the College of Visual and Performing Arts can require the passing of additional reviews, examinations, and assessments of graduate work for a graduate student to be considered in good standing. Such reviews and assessments can result in continuation without reservations, continuation during a probationary period, or termination of student status. Students should consult their advisor for policies specific to their program or area.

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 (Blauw, 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, serigraphy/silkscreening capabilities, and hand papermaking equipment. Our Sculpture facility offers ample workspace for assembly, project spaces dedicated to installation and performance, gallery spaces for student exhibitions, outdoor casting and large-scale 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 well-lighted 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.

College of Visual and Performing Arts
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 non-linear editing stations equipped for HD editing; Steenbek 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 prosenium to theater-in-the-round. Included in the complex are The John D. Archbold Theatre, a 499-seat prosenium theater; The Arthur Storch Theatre, seating up to 250 people, can be configured as a prosenium, thrust, or arena 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 Beffler 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 cross-disciplinary 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.

**Communication and Rhetorical Studies**

**Courses**

**Contact**

Charles Morris, 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-long 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.

Communication and Rhetorical Studies, MS/MA

**Contact**

Charles Morris III, Department of Communication and Rhetorical Studies
100 Sims Hall, 315-443-2308, cemorris@syr.edu

**Faculty**

Richard W. Buttry, Dana Cloud, Kathleen Feyh,
Jeffrey Good, Diane Grimes, Rachel Carey Hall, Amos Kiewe, Charles Morris III, Kendall Phillips, Erin J. Rand

Description
The M.A./M.S. in Communication and Rhetorical Studies requires 33 credits beyond the B.S. or B.A. degree. 24 credits must be taken in the Department of Communication and Rhetorical Studies, and up to 9 may be taken in areas outside the department. No more than 6 credits may be earned in independent study courses. Candidates may choose to write a thesis for 6 credits, or earn the entire 33 credits in coursework and take a culminating comprehensive examination. The Department of Communication and Rhetorical Studies provides degree candidates with first-rate training in communication research, preparing graduates for competitive careers within academia. The curriculum features concentrations in areas for which it has already earned national and international, disciplinary and university, honors based on a proven record of scholarly and pedagogical excellence in rhetoric, critical/cultural studies, and discourse analysis. Furthermore, CRS is committed to producing citizen-scholars—creators who regard communication as a “doing” in the world. We encourage future members of the professoriate to reflexively consider the impact of their scholarship and pedagogy on society at large. The Graduate Record Examination (GRE) is required. Admission into the program as well as graduate assistantship and scholarship awards are determined by the Graduate Admissions Committee in the Department of Communication and Rhetorical Studies.

Admission
The Graduate Record Examination (GRE) is recommended for admission into the Department of Communication and Rhetorical Studies. Admission into the program as well as graduate assistantship and scholarship awards are determined by the Department Chair and Graduate Coordinator.

Program Requirements
Required Courses
CRS 601 - Proseminar in Communication 3 credit(s)
CRS 603 - Contemporary Theories of Rhetoric 3 credit(s)
Electives
CRS 514 - Language & Meaning 3 credit(s)
CRS 535 - Communication & Community 3 credit(s)
CRS 567 - Rhetoric and Philosophy 3 credit(s)
CRS 602 - Empirical Research in Social Communication 3 credit(s)
CRS 605 - Communication and Cosmopolitan Studies 3 credit(s)
CRS 614 - Communication, Power & Gender 3 credit(s)
CRS 630 - Intercultural Communication 3 credit(s)

Total Credits Required: 33 beyond the BS or BA degree
Degree Awarded: MS/MA in Communication and Rhetorical Studies

Department of Drama
This page is currently under revision.
Timothy J. Bond, Producing Artistic Director, Department of Drama and Syracuse Stage
Ralph Zito, Chair
820 East Genesee Street; 315-443-2669
For further information, contact the Office of Student Services, 204 Crouse College.

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.

Department of Transmedia
Heath Hanlin, Chair Department of Transmedia
102 Shaffer Art Building, 315-443-1033
http://vpa.syr.edu/transmedia

The School of Art and Design is an accredited institutional member of the National Association of Schools of Art and Design, has a long tradition of offering students the opportunity to develop their artistic talents and obtain a broad liberal arts education. Students learn from faculty members who are not only teachers, but also practicing artists and designers, with work in major museums, international exhibitions, and professional commercial venues. In addition, the school works in cooperation with the SU Art Galleries, Syracuse University Library's Special Collections Resource Center; LightWork; and the Sue Ann Genet Costume Collection.

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 broad 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.

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
ARTG 300 - Decoding Images
ED 533 - Philosophy and Research
IND 577 - Industrial Design: Philosophy and Ethics
DES 248 - Design Issues

Department of Transmedia

Contact
Heath Hanlin, Chair
102 Shaffer Art Building, 315-443-1033
http://vpa.syr.edu/transmedia

Students in the 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.

Art Photography, MFA

Contact
Laura Heyman, Department of Transmedia
102 Shaffer Art Building, 315-443-1033,
theyman@syr.edu

Faculty
Yasser Aaggour, Doug DuBois, Laura Heyman,
Edward Morris, Susannah Sayler

Description
The M.F.A. program is dedicated to experimentation and exploration within a wide range of photographic and conceptual practices. The curriculum, comprised of seminars, critiques, visiting artist meetings and lectures, tutorials and courses in history, theory and criticism, provides a pluralistic approach to the medium, giving graduate students a nuanced understanding of photography as it relates to contemporary art practice. Our facilities are equipped for work in digital photography and analogue practices, with separate studios for graduate students including high resolution film scanners, large-format archival inkjet printers and a dedicated black and white lab. Digital SLRs, medium-and large-format film cameras, and an extensive array of lighting equipment are available for student use, along with shooting studio equipped for all formats of digital and analog photography. Graduate students also benefit from the department’s close association with Light Work, a nonprofit organization on campus that sponsors an internationally renowned visiting artist program and exhibitions in the Kathleen O. Sullivan Gallery. In addition, the Department of Transmedia maintains its own gallery space for exhibitions and events. In keeping with the global reach of Syracuse University, graduate students have the opportunity to study abroad in Berlin, Moscow and Venice, and with other World Partners.

Program Requirements
Major Studio: 24 credits
APH 640 - Art Photography 3-12 credit(s) 12 credits
APH 740 - Art Photography 3-12 credit(s) 12 credits
Studio Electives: 12 credits
Art History or related academics: 12 credits
Free Electives: 6 credits
Graduate Seminar: 3 credits
TRM 701 - TransMedia Graduate Seminar 3 credit(s)
Final Presentation: 3 credits
Length of Residency: 3 years
Total Credits Required: 60
Degree Awarded: MFA in Art Photography

Art Video, MFA

Contact
Tom Sherman, Department of Transmedia
102 Shaffer Art Building, 315-443-1202,
twsherman@syr.edu

Faculty
Cooper Battersby, Boryana Dragoeva, Tom Sherman, Emily Vey Duke

Description
The graduate program in art video encourages exploration of the aesthetic possibilities of subject, genre, and media technologies from personal points of view. Students in the M.F.A. program work closely with faculty in developing structure and strategies for making art in the video medium, including performance, narrative, documentary, site-specific, and multichannel installation. The program is supported by a multiple format video and audio facility. Production is executed with mini-DV camcorders, digital audio field recorders, and necessary peripherals. Postproduction suites are equipped with Macintosh-based, non-linear editing systems. Video projectors are available for exhibition. There are also digital, multi-track audio studios, a large green-screen shooting stage, plus access to other University facilities to complement production, post-production, and exhibition activities. The art video program at the M.F.A. level assumes candidates are highly motivated to produce challenging work and are capable of working in a tutorial environment. Financial awards are based on portfolio review, letters of recommendation, and previous experience. The production and post-production facilities are staffed by graduate students, affording the opportunity to learn successful management of a multi-use, multi-format facility. M.F.A. degree recipients have typically continued in their field as video artists, independent producers, and faculty in other university video and new media programs.

Program Requirements
Major Studio: 24 credits
Studio Electives: 12 credits
VID 510 - Video Art History 3 credit(s)
VID 610 - Video Research 3-9 credit(s)
VID 613 - Advanced Post-Production Techniques 3 credit(s)
VID 710 - Video Research 3-12 credit(s)
Art history or related academics: 12 credits
Free electives: 6 credits
Graduate seminar: 3 credits
TRM 701 - TransMedia Graduate Seminar 3 credit(s)
Final presentation: 3 credits
Total Credits Required: 60
Length of Residency: 3 years
Degree Awarded: MFA in Art Video

Contact
Annina Ruest, Department of Transmedia
102 Shaffer Art Building, 315-443-1033, arust@syr.edu

Faculty
Heath Hanlin, Annina Ruest, Rebecca Xu

Description
The master of fine arts (M.F.A.) degree program in computer art is an artistic research and development program situated in the context of technology. You are encouraged to develop a diverse set of practices within computer art.

Students are expected to develop a strong record of professional practice in a variety of contexts including exhibition, screenings, public intervention, installation, performance, workshops, gaming events, and viral media, among other forms of public engagement.

The M.F.A. computer art program is a supportive, demanding, and highly critical environment. You work with the three full-time computer art faculty, encompassing a wide range of conceptual, theoretical, and technical ground. As the computer art program is located in the Department of Transmedia, you are expected to form relationships with faculty and peers from related disciplines.

Expanding outward, the Department of Transmedia has connections with other academic areas at Syracuse University, including women’s studies, architecture, studio arts, and computer science. When selecting courses, you are strongly encouraged to formulate an individual interdisciplinary path of study within the University as a whole.

Master’s degree students are encouraged to develop their personal vision of computer art in areas as diverse as computer animation, physical computing, procedural thinking, net. art, sonic art, multi-channel installation, and gaming. The program’s faculty have wide research and technical interests encompassing all these areas in their professional practices.

In addition to creative work, students are expected to develop a personal exhibition strategy and strong exhibition record. Our alumni follow a variety of career paths, from academia to independent work to industry. We are dedicated to helping you reach these goals in a supportive, but demanding and highly critical, environment.

The curriculum is very open, allowing the opportunity for M.F.A. candidates to make vital connections in other areas of the University, such as women’s and gender studies, studio arts, computer science, and especially the other areas within transmedia: photography, video, and film.

Graduate students have 24-hour access to all computer art facilities, dedicated Apple MacPro workstations, video post-production, audio production, a recording studio, video camcorders, field audio recorders, and an array of physical computing gear.

Program Requirements
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.

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
http://vpa.syr.edu/art

The 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...
College of Visual and Performing Arts

to take classes within the larger 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.

Arts in Context - Creative Leadership
The Master of Arts program in Arts in Contexts - Creative Leadership prepares students with diverse art education, studio arts, design, architecture, transmedia, humanities, and entrepreneurship backgrounds to become exemplary change agents in fostering creative leadership in 21st century urban societies. This advanced program of study emphasizes community engagement, social activism, and critical citizenship, providing students with historical and contemporary knowledge, scholarship, and practical experience related to creative leadership development in global educational contexts.

Fall Semester
AIC 610 - The Creative Classroom: Reexamining School Art Misconceptions Through Studio Inquiry 3 credit(s)
AIC 611 - Creative Leadership and Social Responsibility in the Arts 3 credit(s)
AED 584 - Cultural Knowledge, Identity, and Postmodern Art Education 3 credit(s)

Studio Arts, Design or iSchool Elective (3 credits)

Art Ed, Studio Arts or AIC Elective (3 credits)

Spring Semester
AIC 612 - Methods in Creative Leadership: Talent/Agency 3 credit(s)
AIC 618 - Collaborative Arts & Design Practices 3 credit(s)
AIC 619 - Making Methodology: Exploring Arts-based Research 3 credit(s)
Entrepreneurship or Studio Arts Elective (3 credits)
ADD 997 - Masters Thesis 0-6 credit(s)
Ceramics, MFA

Contact
Errol Willet, Department of Art
ComArt Building, 315-443-3700, eswillet@syr.edu

Faculty
Peter Beasecker, Margie Hughto, Errol Willett

Description
Students work in new and traditional techniques in clay and glaze technology and expand their knowledge of the use of clay, glaze, and slips in the building and decorating of pottery, ceramic sculpture, and tile mosaics. Use of gas and electric kilns, other equipment, and the actual running of a ceramic studio are included in this study intensive. Students work in individual studios within the ceramics facility. Graduates combine ceramics with work in a gallery or with work on historical restoration projects, in teaching, museum work, or with design consultants.

Major Requirements
Major studio: 24 credits
Studio electives: 12 credits
Art history or related academics: 12 credits
Free electives: 6 credits
Graduate seminar: 3 credits
Final presentation: 3 credits
Total Credits Required: 60
Length of residency: 3 years
Degree Awarded: MFA in Ceramics
Illustration, MFA

Contact
Martha Blake, Department of Art
102 Shaffer Art Building, 315-443-4613, mablake@syr.edu

Faculty
Martha Blake, Robert Dacey, James Ransome, John Thompson

Description
This program is well suited for individuals who wish to further their professional illustration skills. The candidates will produce a body of work as a thesis requirement and participate in the M.F.A. exhibition. Candidates develop individual approaches to contemporary professional illustration, through drawing, printmaking, 3D and painting skills, as well as conceptual and storytelling ability. The resident illustration program faculty members are all nationally recognized illustrators. They are supplemented by prominent visiting faculty, participation in national events and lectures. Students may complete the award of Master of Fine Arts in Illustration on a 3-year program and take advantage of the Maymester summer program to gain credits.

Program Requirements
Major studio: 24 credits
Studio electives: 12 credits
Art history or related academics: 12 credits
Free electives: 6 credits
Graduate seminar: 3 credits
Final presentation: 3 credits
Total Credits Required: 60
Length of Residency: 3 years
Degree Awarded: MFA in Ceramics

Contact
John Thompson, Department of Art
102 Shaffer Art Building, 315-443-4613, jthompson@syr.edu

Faculty
Kevin Larmon, Department of Art
102 Shaffer Art Building, 315-443-4613, klarmom@syr.edu

Description
Jewelry and metalsmithing at Syracuse is concerned with the development of students as artists and designers able to manipulate a variety of metals and tools for aesthetic ends. Candidates have the opportunity to conduct research through individual pursuit based in traditional jewelry and metalsmithing techniques, mixed media and non-traditional approaches. Instruction is one-to-one. Each graduate student is assigned a semiprivate studio housed in a well-equipped facility.

Program Requirements
Major Studio: 24 credits
JAM 620 - Jewelry and Metalsmithing Research Problems 1-12 credit(s) 12 credit(s)
JAM 720 - Jewelry and Metalsmithing Graduate 1-9 credit(s) 12 credit(s)
Art History or related academics: 12 credits
JAM 671 - History of Jewelry and Metalsmithing 3 credit(s)
Art History Electives 9 credits
Free Electives 6 credits
Graduate Seminar: 3 credits
ART 702 - Graduate Seminar 3 credit(s)
Final Presentation: 3 credits
JAM 996 - Final Presentation 3 credit(s)
Total Credits Required: 60
Length of Residency: 3 years
Studio Electives: 12 credits
Degree Awarded: MFA in Jewelry and Metalsmithing
Painting, MFA

Contact
Sharon Gold, Andrew Havenhand, Kevin Larmon, Stephen Zaima

Faculty
Barbara Walter, Department of Art
ComArt Building, 315-443-3700, bewalter@syr.edu

Description
Jewelry and metalsmithing at Syracuse is concerned with the development of students as artists and designers able to manipulate a variety of metals and tools for aesthetic ends. Candidates have the opportunity to conduct research through individual pursuit based in traditional jewelry and metalsmithing techniques, mixed media and non-traditional approaches. Instruction is one-to-one. Each graduate student is assigned a semiprivate studio housed in a well-equipped facility.

Program Requirements
Major Studio: 24 credits
JAM 620 - Jewelry and Metalsmithing Research Problems 1-12 credit(s) 12 credit(s)
JAM 720 - Jewelry and Metalsmithing Graduate 1-9 credit(s) 12 credit(s)
Art History or related academics: 12 credits
JAM 671 - History of Jewelry and Metalsmithing 3 credit(s)
Art History Electives 9 credits
Free Electives 6 credits
Graduate Seminar: 3 credits
ART 702 - Graduate Seminar 3 credit(s)
Final Presentation: 3 credits
JAM 996 - Final Presentation 3 credit(s)
Total Credits Required: 60
Length of Residency: 3 years
Studio Electives: 12 credits
Degree Awarded: MFA in Jewelry and Metalsmithing
Painting, MFA

Contact
Kevin Larmon, Department of Art
102 Shaffer Art Building, 315-443-4613, klarmom@syr.edu

Faculty
Sharon Gold, Andrew Havenhand, Kevin Larmon, Stephen Zaima

Description
Painting and drawing have excellent facilities in which candidates pursue independent work and research. Each student has a large studio space and is encouraged to be self-motivated. Students work in a variety of contemporary and traditional styles and media and develop critical and self-reflective skills. Painting and drawing have an impressive tradition of excellence, more than 100 years in the making.

Alumni include Bradley Walker Tomlin, Robert Goodnough, Sidney Tillim, Charles Hinman, Peter Plagens, Sol Lewitt, Elizabeth Murray, and Rebecca Purdum.

Program Requirements
Description

Contemporary practices in printmaking are embraced in our master of fine arts (M.F.A.) degree program. A base in the traditional methods of print media lays the groundwork for a jumping off point into experimental, digital, installation, interactive, collaborative and innovative art practices. Our M.F.A. candidates enter the program with a range of interests related to the medium of print and then commit to an intense period of study towards the goal of creating a cohesive and technically sophisticated body of work which can be discussed in the context of contemporary art issues.

Our faculty are working artists with an expansive knowledge of contemporary and traditional printmaking methods. Additionally you will have the opportunity to work closely with our many visiting artists, meet for individual studio critiques and work side-by-side with them in creating limited edition prints. Recent guest artists include: Adriane Herman, John Hitchcock, Sean StarWars, Chris Johanson, Michael Barnes, Jack Damer, Michael Krueger and Kathan Brown.

Our fully ventilated 6,400 sq. ft. facility includes 6 etching and lithography presses ranging in size up to 40" x 72", a separate ventilated acid and solvent clean-up room, separate studio spaces for graduate and undergraduate majors, a hand papermaking lab with 1 lb Voith Hollander beater, typography lab with Vandercook, table top and full size Platen presses plus wood and metal type including Goudy originals, and a computer lab and resource library. Additionally the facility offers a separate state of the art serigraphy studio equipped with a 36" x 48" Douthitt vacuum exposure table, back lit washout sink, 2 vacuum printing stations and 16 printing stations.

Program Requirements

Major Studio: 24 credits

Studio Electives: 12 credits

Art History or related academics: 12 credits

Free Electives: 6 credits

Graduate Seminar: 3 credits

ART 702 - Graduate Seminar 3 credit(s)

Final Presentation: 3 credits

PRT 996 - Final Presentation 3 credit(s)

Total Credits Required: 60

Degree Awarded: MFA in Printmaking

Sculpture, MFA

Contact

Jude Lewis, Department of Art
ComArt Building, 315-443-3700, jillewis@syr.edu

Faculty

Jude Lewis, Stephanie James, Sam Van Aken, Robert Wysocki

Description

Students pursue individual creative research and artistic production. Opportunities are provided for working in traditional and contemporary media. The spacious facilities consist of dedicated workshops for such processes as digital production, metal casting, fabrication, and welding; wood and stone carving; clay; plaster; resins; plastic; and a state-of-the-art wood workshop, among others. Ample workplaces for assembly; project spaces dedicated to installation and performance; gallery spaces for student exhibitions; outdoor casting and large-scale fabrication capabilities; and private studios are provided.

Program Requirements

Major Studio: 24 credits

SCU 660 - Sculpture, Research Problems 1-12 credit(s) 12 credits

SCU 760 - Sculpture, Research Problems 1-12 credit(s) 12 credits

Studio Electives: 12 credits

Art History or Related Academics: 12 credits

Free Electives: 6 credits

Graduate Seminar: 3 credits

ART 702 - Graduate Seminar 3 credit(s)

Final Presentation: 3 credits

SCU 996 - Final Presentation 3 credit(s)

Total Credits Required: 60

Degree Awarded: MFA in Sculpture

Contact

Stephanie James, Director
College of Visual and Performing Arts

Studies 6 credit(s) 6 credits
ARI 604 - Graduate Critique 2 6 credit(s) 6 credits
   Studio Elective (3 credits)
Summer Semester
ARI Intensive (3 credits)
ARI Intensive (3 credits)
Fall Semester 2
ARI 701 - Graduate Seminar 3: Graduate Thesis 6 credit(s)
ARI 703 - Graduate Critique - 3 6 credit(s)
ARI Intensive (3 credits)
Spring Semester 2
ARI 702 - Graduate Seminar 4: Graduate Exhibition 6 credit(s)
ARI Intensive (3 credits)
ARI Intensive (3 credits) -Optional
ARI Intensive (3 credits) -Optional

School of Design
James Fathers, Director Department of Design
The Warehouse, 315-443-2455
http://vpa.syr.edu/design

The School of Art and Design at Syracuse University is a professional school within a university 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 Design

Contact
James Fathers, Director
The Warehouse, First Floor, 315-443-2455
http://vpa.syr.edu/design

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 long 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.

Collaborative Design, MFA

Contact
Donald Carr, Department of Design
The Warehouse, 315-443-2455, dwcarr@syr.edu

Faculty
Donald Carr, James W Fathers, Sarah Redmore

Description
The master of fine arts (M.F.A.) in collaborative design is a two-year graduate program that engages students in collaborative practice within a dynamic multi-disciplinary studio environment. This professional graduate program breaks down boundaries in the academic and corporate worlds, bringing together students, faculty, communities, and businesses to work collaboratively on the world's significant problems for the greater good. The program leads to a master of fine arts (M.F.A.) degree in collaborative design. The M.F.A. in collaborative design is closely aligned with the internationally recognized strengths of Syracuse University, allowing design to be integrated with various campus-wide initiatives. The curriculum is propelled by research work that takes place on an ongoing basis, allowing students to gain unique perspectives and project-based design experiences that lead to a competitive advantage once they graduate. Currently the collaborative design program maintains a research focus based on inclusive design and various lifespan initiatives.

The program is housed within the Department of Design, in Syracuse University's College of Visual and Performing Arts (VPA). The program leverages the energy and activities of other nationally and internationally prominent Syracuse University organizations such as the Aging Studies Institute, the Burton Blatt Institute, and the Syracuse Center of Excellence, as well as SU colleges such as the iSchool, Maxwell School of Citizenship and Public Affairs, Newhouse School of Public Communications, Whitman School of Management, and SUNY College of Environmental Science and Forestry.

A background in design is not required for admission to the program. Students with no design experience will learn basic technical skills and design methodology prior to beginning the program through a series of courses identified with your advisor. All students, even those with a design background, are required to take the Intro to Design Communication along with Design Thinking & Strategies.

Program Requirements

Program Prerequisites
- DES 648 - Introduction to Design Communication 3 credit(s)
- DES 672 - Introductory Design Studio 3 credit(s)

Required Courses
- DES 772 - Design Project 6 credit(s)
- DES 647 - Design Research 3 credit(s)
- DES 748 - Design Communication 3 credit(s)
- DES 771 - Analysis and Synthesis 3 credit(s)
Field trips to museums and conferences, and also in the program. Faculty and staff organize many and the local museum community. They bring a taught by working professionals from the University academic faculty, the program includes courses New York City, Washington D.C., and Los Angeles, programs. Students also have opportunities to does not guarantee admission to other graduate status in the graduate program in museum studies and information studies. However, matriculated fields as art history, anthropology, arts leadership, among others. A significant number of students Studio Art, Education, and Communications, departments and fields, including Art History, training prepares our students for their chosen this combination of academic and professional the city and the region. Students gain additional training and experience through internships at museums and cultural institutions throughout the United States and abroad. We strongly believe that this combination of academic and professional training prepares our students for their chosen fields and sustains them throughout their careers. An important aspect of the program is the availability of courses in a wide variety of related departments and fields, including Art History, Anthropology, Information Studies, Transmedia, Studio Art, Education, and Communications, among others. A significant number of students pursue concurrent or sequential degrees in such fields as art history, anthropology, arts leadership, and information studies. However, matriculated status in the graduate program in museum studies does not guarantee admission to other graduate programs. Students also have opportunities to study away from Syracuse by taking courses in New York City, Washington D.C., and Los Angeles, where they visit significant museums, galleries, and contemporary studios to hear from prominent artists, curators, and gallery owners, many of whom are accomplished SU alumni. In addition to academic faculty, the program includes courses taught by working professionals from the University and the local museum community. They bring a wide range of expertise and experience to students in the program. Faculty and staff organize many field trips to museums and conferences, and also bring professionals to campus as visiting speakers.

Admission
Applicants must have at least a 3.35 average (4.0=A) in the major field and an overall average of no less than 3.0. The Graduate Record Examination (GRE) is highly recommended. (Graduate students from non-visual arts disciplines who are seeking concurrent degrees are encouraged to discuss their backgrounds and their programs of study with the graduate director.)

The M.A. degree requires a minimum one-year residency and 33 credits, 27 of which must be in museum studies. Students must pass a comprehensive examination in order to graduate.

Program Requirements
Core requirements: 18-21 credits
MUS 503 - Introduction to Museum Studies 3 credit(s)
MUS 506 - Introduction to Curatorship 3 credit(s)
MUS 603 - Practicum I 3 credit(s)
MUS 604 - Practicum II 3 credit(s)
MUS 607 - Collections Management 3 credit(s)
MUS 670 - Experience Credit 1-6 credit(s)
Concentration Requirements: 4 credits
(Minimum of two, one of which may be selected from courses offered as MUS 600 - Selected Topics)
MUS 600 - Selected Topics 1-6 credit(s) Print History and Processes
MUS 703 - Advanced Curatorship 3 credit(s)
MUS 708 - Public Learning in Museums 3 credit(s)
MUS 709 - Museum Management 3 credit(s)
MUS 712 - Museum Development 3 credit(s)
General Academic or Studio Electives: 6-9 credits
(at least 3 credits must be in museum studies)
Completion Requirement: 0 credits
Comprehensive examination 0 cr.
Total Credits Required: 33
Degree Awarded: MA in Museum Studies
Cultural Heritage Preservation, CAS

Contact:
Jill Hurst-Wahl, Program Director, 208 Hinds Hall, (315) 443-1070, jgrad@syr.edu
Website: Cultural Heritage Preservation

Overview:
The Certificate of Advanced Study in Cultural Heritage Preservation is a 15-credit hour, graduate-level certificate designed for students currently pursuing another graduate degree or as post-baccalaureate work. This program is only offered to campus-based students. Housed in the iSchool, the program is an interdisciplinary collaboration between Information Studies, Anthropology, and Museum Studies. Recipients of the Cultural Heritage certificate are provided with an interdisciplinary grounding in the preservation of cultural heritage. This includes opportunities to focus on such areas as: the application of digital approaches to heritage preservation; the basics of historic site preservation; the management and interpretation of cultural resources; and the collection, preservation, and curation of archeological artifacts, archival materials, ethnographic data, and museum collections. The certificate program is intended to prepare students to work with organizations such as libraries, museums, National Parks, and State and local agencies in preserving cultural resources.

The Certificate of Advanced Study in Cultural Heritage Preservation requires the completion of 15 credits: 3 units of required courses, 6-9 units of elective courses, 3-6 units of internships. Because students enter the program with different educational and experiential backgrounds, they will work with program advisors to determine the most appropriate ratio of coursework to internships.

Curriculum:
I. Required Courses (3 credits)
IST 622 - Introduction to Preservation of Cultural Heritage 3 credit(s)

II. Electives (6-9 credits)
Students will complete three of the following elective courses. At least two of the three courses must be from outside of the student's primary program of study:
ANT 644 - Laboratory Analysis in Archaeology 3 credit(s)
ANT 682 - Life Histories/Narratives 3 credit(s)
ANT 645 - Public Policy and Archaeology 3 credit(s)
ANT 461 - Museums and Native Americas 3 credit(s)

IST 616 - Information Resources: Organization and Access 3 credit(s)
IST 624 - Preservation of Library and Archival Collections 3 credit(s)
IST 628 - Organization/Management of Archival Collections 3 credit(s)

IST 632 - Management and Organization of Special Collections 3 credit(s)
IST 677 - Creating, Managing, and Preserving Digital Assets 3 credit(s)
IST 715 - LAMS: Libraries, Archives, Museums 3 credit(s)
MUS 500 - Selected Topics 1-6 credit(s)
MUS 506 - Introduction to Curatorship 3 credit(s)
MUS 607 - Collections Management 3 credit(s)
MUS 703 - Advanced Curatorship 3 credit(s)
Other Courses for Elective Credit(s)

With consent of program advisors, a student may petition to substitute other courses for elective credit towards the CAS.

III. Internship (3-6 credits)

Two 150-hour internships are also required. Students will work at an institution, agency, or community organization for two 150-hour internships.

These may be at the same organization or at two different organizations, but should be completed in different semesters. Students will report to both an on-site supervisor and a faculty internship advisor during the process, and the on-site supervisor will evaluate the student's activities at the end of each semester.

The faculty internship advisor can be a faculty member from Information Studies, Museum Studies, or Anthropology. The internships may be taken either as ANT 670, MUS 670 , or IST 971, or upon approval of the appropriate program advisor. By petition, the student may receive 150 hours of credit upon completion.

IV. Summation

In their final semester students will:

Bring together documentation (e.g., papers, internship projects, presentations) into a portfolio that will adequately present their accomplishments and contributions during their course of study and internship experiences and;

Write a paper reflecting on their education and preparation for a professional position.

This summation is a requirement for the completion of the CAS degree.

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.

The school has organic relationships with other entities on campus including the College of Arts & 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 Newhouse School of Public Communications and the 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.

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 various traditional and orchestral instruments. The school maintains and operates the Crouse Chimes and historic Setnor Auditorium with its iconic 3,823-pipe Holtkamp organ.

Conducting, MMus

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, shemen@syrs.edu

Faculty
Jose “Peppie” Calvar, Bradley Ethington, James Tapia, John Warren

Description
The M.Mus. degree program in conducting offers three areas of specialty: winds/percussion, vocal, and strings. Students enter in one specific area but will also study in the other areas to create a comprehensive degree.

All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a terminal requirement of two graduate-level recitals. Written and oral comprehensive examinations must be completed during the final semester.

Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements

Required Courses
MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Electives 15-16 credit(s)

*Examples of Special courses for various emphases might include the following:
MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)

Total Credits Required: 34

Degree Awarded: M.M. in Conducting

Music Composition, MMus

Contact
Nicolas Scherzinger, Chair, Department of Music Composition, Theory, History
120B Crouse College, 315-443-3907, nscherzi@syr.edu

Faculty
Joseph Downing, Daniel Godfrey, John Laverty, Nicolas Scherzinger, Andrew Waggoner

Description
The Setnor School of Music offers a master of music (M.M.) degree program in composition. You will study privately with our prestigious faculty and also meet weekly in the Composer's Symposium to discuss current issues and visit with guest composers.

All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a terminal requirement of two graduate-level recitals. Written and oral comprehensive examinations must be completed during the final semester.

Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements

Required Courses
MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Electives 15-16 credit(s)

*Examples of Special courses for various emphases might include the following:
MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)

Total Credits Required: 34

Degree Awarded: M.M. in Conducting

Music Composition, MMus

Contact
Nicolas Scherzinger, Chair, Department of Music Composition, Theory, History
120B Crouse College, 315-443-3907, nscherzi@syr.edu

Faculty
Joseph Downing, Daniel Godfrey, John Laverty, Nicolas Scherzinger, Andrew Waggoner

Description
The Setnor School of Music offers a master of music (M.M.) degree program in composition. You will study privately with our prestigious faculty and also meet weekly in the Composer's Symposium to discuss current issues and visit with guest composers.

All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a terminal requirement of two graduate-level recitals. Written and oral comprehensive examinations must be completed during the final semester.

Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements

Required Courses
MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Electives 15-16 credit(s)

*Examples of Special courses for various emphases might include the following:
MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)

Total Credits Required: 34

Degree Awarded: M.M. in Conducting

Music Composition, MMus

Contact
Nicolas Scherzinger, Chair, Department of Music Composition, Theory, History
120B Crouse College, 315-443-3907, nscherzi@syr.edu

Faculty
Joseph Downing, Daniel Godfrey, John Laverty, Nicolas Scherzinger, Andrew Waggoner

Description
The Setnor School of Music offers a master of music (M.M.) degree program in composition. You will study privately with our prestigious faculty and also meet weekly in the Composer's Symposium to discuss current issues and visit with guest composers.

All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters
in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a terminal project in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student's major instrument. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements

Required Courses

MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XXX Music History (core) 3 credit(s)
Major 8 credit(s)
Recital 1 credit(s)
Special courses 4 credit(s) *
Music literature, music electives and free electives (varying with emphases) 12 credit(s)

*Examples of Special courses for various emphases might include the following:

MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)
Total Credits Required: 34

Degree awarded: M.M. in Music Composition

Organ, MMus

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheym@ syr.edu

Faculty
Anne Laver

Description
The M.Mus. degree program in performance is offered with the following emphases: piano, organ, strings, wind instruments, percussion, or voice. All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general, most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a terminal project for the performance degree in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student's major instrument. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements

Required Courses

MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XXX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Special courses 4 credit(s) *
Music literature, music electives and free electives (varying with emphases) 11-12 credit(s)

*Examples of Special courses for various emphases might include the following:

MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)
Total Credits Required: 34

Degree Awarded: M.M. in Organ

Percussion, MMus

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheym@ syr.edu

Faculty
Michael Bull, Joshua Dekaney

Description
The M.Mus. degree program in performance is offered with the following emphases: piano, organ, strings, wind instruments, percussion, or voice. All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general, most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a two-part terminal project for the performance degree in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student's major instrument. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements

Required Courses

MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XXX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Special courses 4 credit(s) *
Music literature, music electives and free electives (varying with emphases) 11-12 credit(s)

*Examples of Special courses for various emphases might include the following:

MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)
Total Credits Required: 34

Degree Awarded: M.M. in Percussion

Piano, MMus

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheym@ syr.edu

Faculty
Fred Karpoff, Thomaida Trebicka

Description
The M.Mus. degree program in performance is offered with the following emphases: piano, organ, strings, wind instruments, percussion, or voice. All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits).
In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a two-part terminal project for the performance degree in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student's major instrument. Piano majors whose emphasis is in Piano Ensemble Arts are required to collaborate in at least three recitals per semester. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all fulltime graduate students.

Program Requirements
Required Courses
MUE 615 - Introduction to Research in Music 3 credit(s) (core)
MTC 646 - Advanced Tonal Analysis 3 credit(s) (core)
MHL XXX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Special courses 4 credit(s) *
Music literature, music electives and free electives (varying with emphases) 11-12 credit(s)
*Examples of Special courses for various emphases might include the following:
MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)
Total Credits Required: 34
Degree Awarded: M.M. in Piano
Strings, MMus

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheyman@syr.edu

Faculty
Deette Bunn, Edward Castiliano, Eric Gustafson, Marget Mercer, Kenneth Meyer, Gregory Wood

Description
The M.Mus. degree program in performance is offered with the following emphases: piano, organ, strings, wind instruments, percussion, or voice. All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a two-part terminal project for the performance degree in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student's major instrument. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements
Required Courses
MUE 615 - Introduction to Research in Music 3 credit(s)
MTC 646 - Advanced Tonal Analysis 3 credit(s)
MHL XXX Music History (core) 3 credit(s)
Major 8 credit(s)
Recitals 2 credit(s)
Special courses 4 credit(s) *
Music literature, music electives and free electives (varying with emphases) 11-12 credit(s)
*Examples of Special courses for various emphases might include the following:
MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piano 0-1 credit(s) (Piano or Voice emphasis)
Total Credits Required: 34
Degree Awarded: M.M. in Piano
Strings, MMus

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheyman@syr.edu

Faculty
Janet Brown, Eric Johnson, Kathleen Roland-Silverstein, Julianna Sabol

Description
The Master of Music in Voice Pedagogy is offered through the Setnor School of Music, part of the College of Visual and Performing Arts at Syracuse University. It is a degree designed to meet the needs of the student who has an undergraduate degree in Music with voice as the main instrument, and who desires to pursue a career as a voice instructor, either in an academic setting or a private one. This degree will develop the student into a knowledgeable teacher of singing while enhancing the student's own development as a singer, offering an intensive curriculum in voice pedagogy, pedagogical issues, repertoire, diction, career planning methods, voice study, performance, and experience in teaching. In addition, students will have access to the most current voice science laboratory equipment in collaboration with the Department of Communication Sciences and Disorders, part of the College of Arts & Sciences at Syracuse University.

Admission
Students admitted to the Master of Music in Voice Pedagogy must hold a Bachelor of Music, Bachelor of Arts in Music or Bachelor of Science in Music with Voice being the principal performance area. At least six semesters of voice study within that Bachelor degree are required, with a minimum 3.0 GPA.

Acceptance into the Setnor School of Music is via a graduate music audition.

Admission to the Syracuse University Graduate School.

Admitted students will take diagnostic examinations in Music Theory/Aural Skills, Music History, and diction of French, German and Italian. Remedial course work or passing the test upon a second sitting is required if these examinations reveal deficiencies in any of these areas.

Program Requirements
All course work must be chosen from 500-level courses or higher, with no less than half of the course work chosen from 600-level courses or higher. A lecture recital and capstone project must be completed as well as an oral examination in the last semester of study. A student completing this degree will be knowledgeable to instruct in classical vocal technique and literature in either a private setting or in higher education.

Major Field/Specialization Area: 11 credits
MHL 547 - Vocal Literature II 3 credit(s)
MHL 548 - Vocal Literature III 3 credit(s)
MHL 549 - Vocal Literature IV 3 credit(s)
PDG 519 - Vocal Pedagogy 2 credit(s)
PDG 522 - Vocal Pedagogy II 2 credit(s)
AMC 547 - Advanced Diction for Singers 2 credit(s)
VOC 625 - Grad Voc Prfrmnc Sem I 1 credit(s)
VOC 626 - Grad Voc Prfrmnc Sem II 1 credit(s)
Supportive Studies in Music (Core): 12 credits
MHL Graduate Music History Elective (3 credits)
MUE 615 - Introduction to Research in Music 3 credit(s)
College of Visual and Performing Arts

MTC 646 - Advanced Tonal Analysis 3 credit(s)
AMC 799 - Capstone Project 3 credit(s)
MHL 671 - Weekly Student Convocation Graduate 0 credit(s)
MHL 672 - Weekly Student Convocation Graduate 0 credit(s)
MHL 771 - Weekly Student Convocation Graduate 0 credit(s)
MHL 772 - Weekly Student Convocation Graduate 0 credit(s)

Studio Emphasis: 9 credits
VOC 615 - Voice/Music Majors 1-6 credit(s)
VOC 616 - Voice/Music Major 1-6 credit(s)
VOC 715 - Voice/Music Major 1-6 credit(s)
VOC 716 - Voice/Music Majors 1-6 credit(s)
PER 996 - Lecture Recital 0-1 credit(s)

Ensemble Participation: 0 credits

The student in the MM Voice Pedagogy degree should have two semesters of Ensemble participation.
Transfer Credit:
A maximum of 9 graduate-level credits can be transferred from another institution.

Total Credits Required: 32
Degree Awarded: M.M. in Voice Pedagogy

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheyman@syr.edu

Faculty
Janet Brown, Richard Crawley, Jonathan English, Eric D. Johnson, Julie McKinstry, Bridget Moriarty, Kathleen Roland-Silverstein, Julianna Sabol, Carolyn Weber

Description
The M.Mus. degree program in performance is offered with the following emphases: keyboard, keyboard accompaniment, strings, voice, woodwinds, brass, or percussion.

All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a two-part terminal project for the performance degree in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student’s major instrument. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all full-time graduate students.

Major Requirements
MUE 615 - Introduction to Research in Music 3 credit(s)
MTC 646 - Advanced Tonal Analysis 3 credit(s)
MHL xxx Music History (core) 3 credit(s)
MHL 8 credit(s)
Recitals 2 credit(s)
Special courses 4 credit(s) *

Music literature, music electives and free electives (varying with emphases) 11-12 credit(s)

Examples of Special courses for various emphases might include the following:

MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piana 0-1 credit(s)

Major Total Minimum Credits Required: 34

Degree Awarded: M.M. in Voice

Wind Instruments, MMs

Contact
Steven Heyman, Chair, Department of Applied Music and Performance
310 Crouse College, 315-443-1638, sheyman@syr.edu

Faculty
Cornelia Brester, Jill Coggiola, Michael Coldren, Kelly Covert, Dana DiGennaro, Jon Garland, William Harris, Diane Hunger, Christopher Jabbot, Alina Plourde, Gregory Quick, Jeffrey Stockham

Description
The M.Mus. degree program in performance is offered with the following emphases: piano, organ, strings, wind instruments, percussion, or voice.

All graduate students are required to complete a core sequence of courses in research, music history, and music theory (a total of nine credits). In general most graduate students are required to complete 34 to 36 graduate credits beyond the baccalaureate and normally four semesters in residence. Similar academic patterns and admissions procedures comprise each program for the M.Mus.: 8 credits in the major, 3 credits in music history, 3 credits in music theory, 3 credits in research, 2 credits in recitals, and the remainder to be taken in special courses for various emphases and in music literature, music electives, or free electives (varying according to emphases).

The program promotes the attainment of high levels of performance and a solid grasp of general musical knowledge, as demonstrated by a two-part terminal project for the performance degree in which the candidate performs in two major public appearances. One is a solo recital; the second may be another solo recital, an ensemble recital, a performance of a major concerto with orchestra, or a lecture recital on a subject relevant to the student’s major instrument. Written and oral comprehensive examinations must be completed during the final semester. Convocation attendance and ensemble participation are required for all full-time graduate students.

Program Requirements
Required Courses
MUE 615 - Introduction to Research in Music 3 credit(s)
MTC 646 - Advanced Tonal Analysis 3 credit(s)
MHL XXX Music History (core) 3 credit(s)
MHL 8 credit(s)
Recitals 2 credit(s)
Special courses 4 credit(s) *

Music literature, music electives and free electives (varying with emphases) 11 credit(s)

Examples of Special courses for various emphases might include the following:

MHL 535 - Orchestral Repertoire: 1600-1800 2 credit(s) (String emphasis)
ENC 520 - Chamber Music/Piana 0-1 credit(s)

Major Total Minimum Credits Required: 34

Total Credits Required: 34

Degree Awarded: M.M. in Wind Instruments
Deette Bunn, Part-time Instructor  
Acting, Directing  
MFA, University of California, San Diego

Robert Bundy, Assistant Professor  
M.M., Syracuse University, 1977

Illustration

Yvonne Buchanan, Assistant Professor  
Voice, Baroque Ensemble  
M.M., Syracuse University, 1993

Janet Brown, Professor of Practice  
Flute  
M.M., University of Wisconsin-Madison, 1965

Lighting Design, Theater Technology  
B.F.A., Syracuse University, 1993

David Bowman, 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., Pennslyvania 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  
M.F.A., 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. Buttry, Professor  
Ph.D., University of Massachusetts, 1983  
Intercultural Communication, Language, and Social Interaction

José Peploe 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 Castiliano, 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  
Harpischord, 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 Cochrane, Associate Professor  
Carnegie Mellon University  
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  
Horn
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 Kozlara, Associate Professor
M.F.A., SUNY at Purchase, 1998
Lighting and Set Design, CAD lab

Meghan C. Kulczyński, 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
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
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.A.mSAT, 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 Nicotelli, Part-time Instructor
M.F.A., Syracuse University, 1986
Drawing, 2-D Creative Processes

Ulf Oesterle, Assistant Professor; Chair, Department 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 Design

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 Salut, 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 Spitznner, 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

I da 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
approaches, against traditional models of argument, constructivist approaches, cognitive emerging perspectives of the field theory of communication and rhetorical studies.

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 560 - Selected Topics
Communication and Rhetorical 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

CRS 601 - Proseminar in Communication
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
An introduction to selected social science communication theories and research exemplars that define the study of contemporary communication.

CRS 602 - Empirical Research in Social Communication
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
A survey of quantitative and qualitative empirical research methods in the study of speech communication. Topics include experimental, survey, and qualitative designs, measurements, and techniques for data analysis.

CRS 603 - Contemporary Theories of Rhetoric
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
British, American, and Continental rhetorical thought in 19th and 20th centuries.

CRS 604 - Qualitative Communication Research Methods
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
A survey of qualitative research methods including logic, philosophy, innovations, and controversies in these methods.

CRS 605 - Communication and Cosmopolitan Studies
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Foundations of critical communication theory with focus on communication as a constitutive phenomenon. Social constructionist, feminist, postmodern, poststructural, historical perspectives on communication.

CRS 606 - Issues and Methods in Critical Communication Theory
Communication and Rhetorical Studies
3 credit(s) Upon sufficient interest
Applications and methodological implications of critical perspectives and frameworks introduced in CRS 605. Critical methodologies and research strategies.
PREREQ: CRS 605

CRS 614 - Communication, Power & Gender
Communication and Rhetorical Studies
3 credit(s) Irregularly
Crosslisted with: WGS 615
Consideration of the ways in which communication structures power and gender relations. Reviewing Continental and North American literature on power, and feminist literature on gender, students study how communication produces social identities and hierarchies.

CRS 615 - Frontiers of Communications
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CRS 315
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 617 - Innovation in Communication and Rhetoric
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CRS 317
Understanding innovation as a communication and rhetorical phenomenon, and to identify how innovation emerges from different communication and rhetorical practices.

CRS 624 - Business Communication
Communication and Rhetorical Studies
1.5 credit(s)
Communication skills for oral presentations including effective public speaking, group presentation, committee reports, and critical assessments.

CRS 625 - Oral Communication Skills for Engineers
Communication and Rhetorical Studies
3 credit(s)
Instruction in effective presentational communication skills. The course includes the fundamentals of oral communication and their application and practice in different presentational contexts.

CRS 626 - Medieval and Modern Theories of Rhetoric
Communication and Rhetorical Studies
3 credit(s) Upon sufficient interest
Theories formulated by medieval and modern rhetoricians. Decay of classical tradition in the Middle Ages. The Renaissance.

CRS 627 - Speechwriting
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CRS 327
Principles and practices of writing ceremonial and persuasive speeches for clients. Additional work required of graduate students.

CRS 630 - Intercultural Communication
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CRS 430
Principles and applications. Approaches and issues pertinent to effective communication across cultures and in multicultural societies. Verbal and nonverbal patterns. Culture shock.

CRS 636 - Feminist Rhetoric(s)
Communication and Rhetorical Studies
3 credit(s)
Crosslisted with: CCR 636, WGS 636
Double Numbered with: CRS 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.

CRS 655 - Rhetorical Criticism
Communication and Rhetorical Studies
3 credit(s) At least 1x 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 668 - Social Movement Rhetorics
Communication and Rhetorical Studies
3 credit(s) Even Academic Yr e.g. 2004-5
Offers theoretical and critical inquiry into the rhetoric of social movements through diverse interdisciplinary scholarship and case studies.

CRS 670 - 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.

CRS 683 - Rhetoric of Film
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Double Numbered with: CRS 483
Examination of how popular films and documentaries function rhetorically to reflect and construct social and political change.

CRS 690 - Independent Study
Communication and Rhetorical Studies
1-6 credit(s) Upon sufficient interest
Guided independent reading, performance, and/or direction geared to interest and development of individual student. Permission of instructor Repeatable 5 time(s), 6 credits maximum.

CRS 694 - African American Rhetorics
Communication and Rhetorical Studies
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: CCR 744
Surveys African American discourse and its relationship to equality, resistance and participation. Examines philosophical concepts, political issues, discursive characteristics, traditions, theories, and histories of African American Rhetoric.

CRS 745 - Research Seminar in Communication and Rhetorical Studies
Communication and Rhetorical Studies
3 credit(s) Upon sufficient interest
Analyzing research studies; conducting a study to develop a methodology for graduate theses.

CRS 746 - Queer Rhetorics
Communication and Rhetorical Studies
3 credit(s) Even Academic Yr e.g. 2004-5
Crosslisted with: CCR 746, QSX 746, WGS 746
Explores contemporary queer scholarship and activism from a rhetorical perspective. Analyzes purposes, arguments, tropes, figures, exigencies, modes of delivery, and audiences in historical and transnational contexts.

CRS 825 - Seminar in Persuasion
Communication and Rhetorical Studies
3 credit(s) Upon sufficient interest
Analysis and criticism of contemporary research in principles and methods of persuasion.

CRS 835 - Seminar in Discussion
Communication and Rhetorical Studies
3 credit(s) Upon sufficient interest
Analysis of contemporary research in principles and methods of discussion. Permission of instructor

CRS 862 - Seminar in Rhetoric and Public Address
Communication and Rhetorical Studies
3 credit(s) Upon sufficient interest
Analysis and criticism of contemporary research in rhetoric and public address of various historical periods and in various nations.

CRS 996 - Faculty Guided Research Project
Communication and Rhetorical Studies
3 credit(s) At least 1x fall or spring
Student writes a research paper on a project negotiated with a faculty member based on area of expertise.

CRS 997 - Master's Thesis
Communication and Rhetorical Studies
6 credit(s) At least 1x fall or spring

DRA 515 - Play Analysis and Introduction to Mise-en-Scène
Drama
3 credit(s) At least 1x 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
College of Visual and Performing Arts

DRA 523 - Audition Technique
Drama
3 credit(s) Every semester
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), 9 credits maximum

DRA 524 - Acting: Drama in the Elizabethan and Romantic Modes
Drama
0-3 credit(s) At least 1x 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 1x 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 1x 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 1x 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.

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 - Emergence of Modern 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.

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 1x 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.
and nondramatic literature through staged group reading. Permission of instructor.

DRA 639 - Projects in Directing
Drama
1-6 credit(s) Upon sufficient interest
Directing projects proposed by advanced students, usually graduate students, for developing and/or demonstrating their skills. Projects must be approved by faculty member who serves as advisor-critic and by department.

DRA 651 - Graduate Seminars in Theatrical and Dramatic History
Drama
3 credit(s) Upon sufficient interest
Exploration of a period, stylistic development, or other aspect of history of theater and drama selected by department and announced before registration.
PREREQ: DRA 355, 356
Repeatable

DRA 652 - Graduate Seminars in Modern Theater and Drama
Drama
3 credit(s) Upon sufficient interest
Exploration of an aspect of the development of theater and drama of our time, selected by department and announced before registration.
PREREQ: DRA 355, 356
Repeatable

DRA 655 - Dramatic Criticism
Drama
3 credit(s) Upon sufficient interest
Representative forms and exponents of dramatic criticism from major periods of dramatic history. Permission of instructor.

DRA 656 - Dramatic Criticism
Drama
3 credit(s) Upon sufficient interest
Representative forms and exponents of dramatic criticism from major periods of dramatic history. Permission of instructor.

DRA 660 - Music Theater Practicum
Drama
1-3 credit(s) Upon sufficient interest
Individual coaching in performance techniques. Student-proposed projects in directing and other areas related to musical productions. Permission of instructor.

DRA 670 - Experience Credit
Drama
1-6 credit(s) Upon sufficient interest
Participation in 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 of instructor.

DRA 690 - Independent Study
Drama
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. Permission of instructor. Repeatable

DRA 710 - Graduate Readings
Drama
1-6 credit(s) Upon sufficient interest
Repeatable

DRA 715 - Seminar in Mise-en-Scène
Drama
3 credit(s) Upon sufficient interest
For graduate directing and design students. Production theory and practical approaches to research, script analysis, and conceptualization of theatrical productions. Required of all M.F.A. candidates before beginning thesis project.
PREREQ: DRA 355, 356, DRA 515, DRA 531, DRA 651, DRA 652

DRA 996 - Graduate Research Project(s)
Drama
1-6 credit(s) Upon sufficient interest
Project(s) demonstrating M.F.A. candidate’s mastery of chosen field: theatrical design or directing. Selected with advice and consent of departmental advisors. Written presentation and oral defense of major paper, documenting research, script analysis, and conceptualization of theatrical productions. Required of all M.F.A. candidates. Repeatable

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
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.

DRD 617 - Advanced Practicum in Scene Painting
Drama
2 credit(s) Upon sufficient interest
Problems and practice in scene painting for production, supervised by Syracuse Stage professional staff and faculty advisor. Permission of instructor.

DRD 618 - Advanced Practicum in Properties Construction
Drama
2 credit(s) At least 1x fall or spring
Individual projects in design of sets, lights, or costumes for actual production, assigned and supervised by faculty advisor. Permission of instructor. Repeatable

DRD 641 - Advanced Projects in Design and Technical Theater
Drama
3-6 credit(s) Upon sufficient interest
The role of the production manager in the process of producing a theatrical season and administering a production department.
PREREQ: DRD 251, 340, 450

DRD 632 - Stage Lighting II
Drama
3 credit(s) At least 1x fall or spring
Double Numbered with: DRD 332
Contemporary artists working with photographic images are studied through slides, readings, lectures, and discussions.

DRD 637 - Advanced Practicum in Stage Lighting
Drama
2 credit(s) Upon sufficient interest
Problems and practice in stage lighting for production, supervised by Syracuse Stage professional staff and faculty advisor. Permission of instructor

DRD 638 - Advanced Practicum in Theater Sound
Drama
2 credit(s) Upon sufficient interest
The role of the production manager in the process of producing a theatrical season and administering a production department.

DRD 642 - Production Management
Drama
3 credit(s) At least 1x fall or spring
The role of the production manager in the process of producing a theatrical season and administering a production department.
PREREQ: DRD 251, 340, 450

APH 460 - Art Photography: Contemporary
Art and Photography
Department of Transmedia
3-12 credit(s) Upon sufficient interest
Intensive workshop geared toward individual student requirements within the context of the development of an extended body of work. Individual and group critique. Repeatable
**APH 740 - Art Photography**  
*Department of Transmedia*  
3-12 credit(s) Upon sufficient interest  
Intensive workshop geared toward individual student requirements within the context of the development of an extended body of creative work. Individual and group critiques used regularly.  
Repeatable

**APH 996 - Final Presentation**  
*Department of Transmedia*  
3 credit(s) Every semester  
Written statement to accompany final project, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor’s approval.

**APH 997 - Masters Thesis**  
*Department of Transmedia*  
1-6 credit(s) Every semester  
Formal master’s thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**VID 510 - Video Art History**  
*Department of Transmedia*  
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.

**VID 610 - Video Research**  
*Department of Transmedia*  
3-9 credit(s) Upon sufficient interest  
Production of videotapes in the context of independent art related to concerns by individual. Crew experience required. Directed readings, group critiques with weekly meetings.

**VID 613 - Advanced Post-Production Techniques**  
*Department of Transmedia*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: VID 313  
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.

**VID 710 - Video Research**  
*Department of Transmedia*  
3-12 credit(s) Upon sufficient interest  
Production of videotapes in the context of independent art related to concerns. Crew experience required. Directed readings, group critiques with weekly meetings.

**VID 996 - Final Presentation**  
*Department of Transmedia*  
3 credit(s) Every semester  
Written statement to accompany final project, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor’s approval.

**VID 997 - Masters Thesis**  
*Department of Transmedia*  
0-6 credit(s) Every semester  
Formal master’s thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**CAR 501 - Animation Workshop II**  
*Department of Transmedia*  
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 410

**CAR 502 - Visual Effects Workshop II**  
*Department of Transmedia*  
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**  
*Department of Transmedia*  
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**  
*Department of Transmedia*  
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

**CAR 630 - Computer Art Studio**  
*Department of Transmedia*  
3-12 credit(s) Every semester  
Research problems. Counseling and permission of advisor to determine area of study. Permission of Instructor.  
Repeatable

**CAR 730 - Computer Art Studio**  
*Department of Transmedia*  
3-12 credit(s) Every semester  
Research in advanced problems in computer graphic art. Counseling and permission of advisor determines areas of study. Can be taken for a maximum of 12 credits.  
PREREQ: CAR 630  
Repeatable 3 time(s), 12 credits maximum

**FIL 520 - Film Studies Seminar**  
*Department of Transmedia*  
3 credit(s) Every semester  
Advanced topics relating a focused set of critical and theoretical questions to a specific film or group of films. For graduate and advanced undergraduate students.  
PREREQ: FIL 225 OR 226

**FIL 521 - Filmmaking: Selected Topics**  
*Department of Transmedia*  
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**  
*Department of Transmedia*  
3 credit(s) At least 1x fall or spring  
Exercises in filming fictional dramatic scripts. Required of B.F.A. acting students and all film
FIL 527 - Critical Problems Film & Video
Department of Transmedia
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 226

FIL 620 - Filmmaking: Graduate Project
Department of Transmedia
0-6 credit(s) Upon sufficient interest

FIL 623 - Film Script Writing
Department of Transmedia
3 credit(s) Upon sufficient interest
Students produce scripts based on problems of adaptation as well as original work. Problems in dramatic structure, diegesis and dialogue. Permission of Instructor.

FIL 625 - Intro Film Theory & Criticism
Department of Transmedia
3 credit(s) Upon sufficient interest
Individual and group graduate research projects in topics of film theory and criticism. Permission of Instructor.

FIL 626 - Problems of Film Perception
Department of Transmedia
3 credit(s) Upon sufficient interest
Additional graduate research in topics of film theory. Required of all M.F.A. candidates. PREREQ: FIL 625

FIL 720 - Filmmaking: Graduate Project
Department of Transmedia
0-6 credit(s) Every semester
Advanced graduate filmmaking, required of all M.F.A. candidates. Meets weekly. Individual and group filmmaking projects. PREREQ: FIL 620

FIL 725 - Film Theory: Topics
Department of Transmedia
3 credit(s) At least 1x fall or spring

FIL 726 - Film Theory: Topics
Department of Transmedia
3 credit(s) At least 1x fall or spring

FIL 996 - Final Presentation
Department of Transmedia
3 credit(s) Every semester
Written statement to accompany final project, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

FIL 997 - Masters Thesis
Department of Transmedia
0-6 credit(s) Every semester
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

TRM 601 - Practicing in Public
Department of Transmedia
3 credit(s) At least 1x fall or spring
Crosslisted with: ART 601
This course brings together graduate students from across VPA for interdisciplinary graduate critique. Critique of exhibition of student work is led by a visiting artist, curator, and/or critic. Repeatable 2 times, 6 credits maximum

TRM 610 - Literacy, Community and Media
Department of Transmedia
3 credit(s)
Double Numbered with: TRM 310
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 701 - TransMedia Graduate Seminar
Department of Transmedia
3 credit(s) Irregularly
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 510 - Special Problems in Art Ed
School of Art
1-6 credit(s) At least 1x 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
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
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
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
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
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.

AED 612 - Creativity & Its Cultivation
School of Art
3 credit(s) At least 1x fall or spring
How do we recognize creativity? Who are the innovative individuals? Seminar workshop identifies essential criteria to discover and experience levels of creative behavior. Multisensory nature of imagination and its cultural significance. Students experiment in perceptual activities leading to design of aesthetic and educational strategies.

AED 616 - Apprenticeship/Art Supervision
School of Art
3 credit(s) Upon sufficient interest
AED 617 - Philosophy & Foundations of Art Education Practice  
School of Art  
3 credit(s) At least 1x fall or spring  
Double Numbered with: AED 317  
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 618 - Seminar in Art Education  
School of Art  
3 credit(s) Upon sufficient interest  
Prevailing opinions concerning objectives, materials, and curriculum procedures in art education at various age levels. Variety of research requirements and procedures in the field.

AED 621 - Making Meaning: Socially Responsible Arts & Design Practices  
School of Art  
3 credit(s) At least 1x fall or spring  
Experiments with new approaches for making art, architecture and/or design when creative practice and arts & design education are undertaken as an avenue of social responsibility.

AED 710 - Problems/Teacher As Artist  
School of Art  
2-18 credit(s) Upon sufficient interest  
Technical problems in art education. Limited to students working toward master's degree in art education.  
Repeatable

AED 798 - Final Presentation  
School of Art  
3 credit(s) Upon sufficient interest  
Final presentation accompanied by written statement, culminating in oral examination. Taken during final semester upon advisor's approval.

AED 990 - Independent Study  
School of Art  
1-6 credit(s)  
Repeatable

AIC 610 - The Creative Classroom: Reexamining School Art Misconceptions Through Studio Inquiry  
School of Art  
3 credit(s) At least 1x 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.

AIC 611 - Creative Leadership and Social Responsibility in the Arts  
School of Art  
3 credit(s) Every semester  
Double Numbered with: AIC 311  
Online course designed to equip students with strategies for a socially responsible approach to creative leadership and citizen entrepreneurship that may be applied within school systems, arts organizations, museums, and community centers. Additional work required of graduate students.

AIC 612 - Methods in Creative Leadership: Talent/Agency  
School of Art  
3 credit(s) Every semester  
Double Numbered with: AIC 312  
Community engagement coursework focused on planning and instruction of ongoing arts & design-based portfolio development, mentoring workshops for teens, fostering the next generation of creative leaders. Additional work required of graduate students.

AIC 618 - Collaborative Arts & Design Practices  
School of Art  
3 credit(s) Every semester  
Double Numbered with: AIC 318  
Drawing upon diverse disciplinary content, rethinking the role of the arts & design in society as purpose-driven, as a way of knowing and as an urgent, beneficial means of active social entrepreneurship. Additional work required of graduate students.

AIC 619 - Making Methodology: Exploring Arts-based Research  
School of Art  
3 credit(s) At least 1x fall or spring  
Crosslisted with: AED 798  
An in-depth exploration of arts-based research methodologies that emerge out of the natural affinity between research practice and artistic practice. Various methodologies will be applied to selected social, educational, and creative research problems.

AIC 621 - Art, Activism, Modernity  
School of Art  
3 credit(s)  
Double Numbered with: AIC 321  
History, theory, and practice of visual artists in publicly-engaged, community-based, and socially-active projects.

AIC 623 - Artists Who Write  
School of Art  
3 credit(s)  
Double Numbered with: AIC 423  
Analysis, history of manifestos, theoretical writings produced by visual artists in the 20th century. Students write their own manifestos, press releases, artist statements and other forms of art communication.

AIC 632 - The Artist Critic  
School of Art  
3 credit(s) At least 1x fall or spring  
Double Numbered with: AIC 332  
Designed for students who have an interest in becoming a critic in the arts. Each week new productions will come under your scrutiny in the development of your views and critical positions. Additional work required of graduate students.

ARI 563 - Painting: Art for Non-Majors  
School of Art  
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.FA. except by petition to Department of Studio Arts.  
Repeatable 1 time(s), 6 credits maximum

ARI 564 - Studio Symposium  
School of Art  
3 credit(s) At least 1x fall or spring  
Introduce students to the world of visual art, its purposes and practices, themes and concerns. Various disciplines, historical, and stylistic periods of art are examined to understand the intentions of the artists and periods reviewed.

ARI 566 - Painting: Experimental Media: Assemblage/Collage  
School of Art  
3 credit(s) At least 1x fall or spring  
Students will create artworks using non-traditional materials exploring assemblage with found materials.  
Repeatable 1 time(s), 6 credits maximum
ARI 575 - Lake Effect Editions: Fine Art Print Publishing
School of Art
3 credit(s) Every semester
Work directly with Visiting Artists to create new works on paper. Participants will also get experience with the presentation and sale of works on paper published by Lake Effect Editions.
Repeatable 1 time(s), 6 credits maximum

ARI 600 - Selected Topics
School of Art
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

ARI 601 - Graduate Seminar 1: Theory and Ideas
School of Art
6 credit(s) At least 1x fall or spring
Designed for first year graduate students ARI 601, is an introduction to the MFA, focusing on the development of artistic practice enabling the students to define their place within and beyond contemporary artistic practices.

ARI 602 - Graduate Seminar 2: Professional Studies
School of Art
6 credit(s) At least 1x fall or spring
Focuses on the development of essential professional practices in the visual arts and is designed to support each student to identify and build the necessary professional skills as they relate to individual artistic practices.
PREREQ: ARI 601

ARI 603 - Graduate Critique 1: Practice in Visual Arts
School of Art
6 credit(s) Every semester
Brings students together to take part in critique. This team taught course is designed to engage students in the creation and discussion of art in a contemporary context broader than specific media and discipline.

ARI 604 - Graduate Critique 2
School of Art
6 credit(s) Every semester
Students take part in critique of practice in a professional context. This team taught course is designed to engage students in the creation and discussion of art beyond that of specific media and discipline.

ARI 690 - Independent Study
School of Art
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

ARI 701 - Graduate Seminar 3: Graduate Thesis
School of Art
6 credit(s) At least 1x fall or spring
This course will focus each student in their endeavor to compose a thesis paper prior to their creation of a body of thesis work creating the foundation for their future practice and career.
PREREQ: ARI 602

ARI 702 - Graduate Seminar 4: Graduate Exhibition
School of Art
6 credit(s) At least 1x fall or spring
This course will focus each student in their endeavor to realize a body of thesis work following the writing of the thesis paper in ARI 701 creating the foundation for their future practice and career.
PREREQ: ARI 602 AND ARI 701

ARI 703 - Graduate Critique - 3
School of Art
6 credit(s) At least 1x fall or spring
Brings students together to take part in advanced level critique. This team-taught course engages students in the creation of their artwork and discussion of it in a contemporary context.
PREREQ: ARI 602 AND ARI 603 AND ARI 604

ARL 600 - Selected Topics
School of Art
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

ART 500 - Selected Topics
School of Art
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
3 credit(s) Upon sufficient interest
An examination of the main theories of art, classical and contemporary.

ART 531 - Professional Practices in Visual Arts
School of Art
3 credit(s) At least 1x 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
3 credit(s) At least 1x 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
Introduce students to the world of visual art, its purposes and practices, themes and concerns. Various disciplines, historical, and stylistic periods of art are examined to understand the intentions of the artists and periods reviewed.

ART 563 - Art in America I
School of Art
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
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

ART 601 - Practicing in Public
School of Art
3 credit(s) At least 1x fall or spring
Crosslisted with: TRM 601
This course brings together graduate students from across VPA for interdisciplinary graduate critique. Critique of exhibition of student work is led by a visiting artist, curator, and/or critic.
Repeatable 2 time(s), 9 credits maximum
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 631 - Art Nouveau Design and Architecture: Studies in Material Culture**
School of Art
4 credit(s)
Double Numbered with: ART 431
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.

**ART 640 - Visiting Artist Lecture Series**
School of Art
1 credit(s) Every semester
Double Numbered with: ART 340
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 interdisciplinary connections. Additional work required of graduate students.

Repeatable 5 time(s), 6 credits maximum

**ART 690 - Independent Study**
School of Art
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

**ART 701 - Graduate Seminar**
School of Art
3 credit(s) Upon sufficient interest

**ART 702 - Graduate Seminar**
School of Art
3 credit(s) Upon sufficient interest

**CER 520 - Raku Workshop**
School of Art
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
1-6 credit(s) Every semester
Advanced research.
PREREQ: CER 423 AND 424

**CER 527 - Ceramic Technology Research**
School of Art
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
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
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.

**CER 620 - Ceramic Research Problems**
School of Art
1-12 credit(s) Upon sufficient interest
Professional problems in ceramics; advanced study in technique and theory. Development of a consistent body of work. Permission of Instructor.
Repeatable

**CER 720 - Ceramic Research Problems**
School of Art
1-12 credit(s) Upon sufficient interest
Continuation of CER 620. Permission of Instructor.
Repeatable

**CER 996 - Final Presentation**
School of Art
3 credit(s) Every semester
Final presentation accompanied by written statement, culminating in oral examination for M.F.A. or M.I.D. degree. Taken during final semester upon advisor's approval.

**CER 997 - Masters Thesis**
School of Art
1-6 credit(s) Every semester
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**CER 999 - Final Presentation**
School of Art
3 credit(s) Every semester

**DRW 503 - Drawing and Painting for Non-Art Majors**
School of Art
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
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
1-6 credit(s) Every semester
Crosslisted with: PTG 555
Drawing as an expression and creative art form.
PREREQ: PTG 455 AND 456

**DRW 600 - Selected Topics**
School of Art
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.

**DRW 650 - Drawing, Graduate**
School of Art
1-12 credit(s) Every semester
Crosslisted with: PTG 650
Drawing as self-contained expression through contemporary and historical investigation of materials and techniques.

**FIB 620 - Fiber Arts Research Problems**
School of Art
1-12 credit(s) At least 1x fall or spring
Designed by student and faculty to involve student in program of personal research in fiber arts (whether on- or off-loom) stressing development of concept and technique.
Repeatable

**FIB 720 - Fiber Arts Research Problems**
School of Art
1-12 credit(s) At least 1x fall or spring
Continuation of FIB 620.

**FIB 996 - Final Presentation**
School of Art
3 credit(s) Every semester
Final presentation accompanied by written statement, culminating in oral examination for M.F.A. or M.I.D. degree. Taken during final semester upon advisor's approval.

**FIB 997 - Masters Thesis**
*School of Art*

0-6 credit(s) Every semester

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**ILL 561 - Illustration Concept**
*School of Art*

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*

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 565 - Intro to Digital Illustration**
*School of Art and Design*

3 credit(s) Every semester

Exploration and use of vector and bitmap computer applications to solve visual communication problems and create illustrations.

**ILL 655 - Illustration Concepts: Editorial Track II**
*School of Art*

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

Double Numbered with: ILL 455

For senior/graduate students continuing to advance their study in editorial illustration related to Freelance Illustration, Publishing, (either in print or digitally) or Websites. Assignments in drawing and digital skills commenting on social and/or political issues.

PREREQ: ILL 355

Repeatable 1 time(s), 6 credits maximum

**ILL 655 - Illustration Concepts: Sequential Track II**
*School of Art*

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

Double Numbered with: ILL 456

Advanced skills for Graphic Novels, Children's Books, Comics or Storyboarding.

PREREQ: ILL 356

Repeatable 1 time(s), 6 credits maximum

**ILL 660 - Illustration Research Problems**
*School of Art*

1-18 credit(s) Upon sufficient interest

Research into application of illustration.

**ILL 760 - Illustration Communication**
*School of Art*

1-12 credit(s) Upon sufficient interest

Historical and contemporary aspects of illustration as they relate to the communication process.

PREREQ: ILL 660

**ILL 996 - Final Presentation**
*School of Art*

3 credit(s) Every semester

Written statement to accompany final project, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

**ILL 997 - Master's Thesis**
*School of Art*

0-6 credit(s) Every semester

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**JAM 600 - Selected Topics**
*School of Art*

1-9 credit(s) Every semester

Advanced graduate creative research and critical discussion that focus on studio work in preparation for entry into the field as a studio artist, educator, writer and/or critic. Graduate Standing.

Repeatable

**JAM 671 - History of Jewelry and Metalsmithing**
*School of Art*

3 credit(s) Even Academic Yr e.g. 2004-5

Double Numbered with: JAM 471

Study the history of jewelry/metalsmithing from prehistoric to contemporary pieces. Differences and similarities among cultures is discussed.

**JAM 674 - Jewelry and Metalsmithing Contemporary Issues**
*School of Art*

3 credit(s) Even Academic Yr e.g. 2004-5

Double Numbered with: JAM 474

Reading, research and discussion of the issues that face contemporary studio jewelers, metalsmiths, collectors, curators, critics and the jewelry industry.

**JAM 720 - Jewelry and Metalsmithing Graduate**
*School of Art*

1-9 credit(s) Every semester

Advanced graduate creative research and critical discussion that focus on studio work in preparation for entry into the field as a studio artist, educator, writer and/or critic. Graduate Standing.

Repeatable

**JAM 996 - Final Presentation**
*School of Art*

3 credit(s) Every semester

Final presentation accompanied by written statement, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

**JAM 997 - Master's Thesis**
*School of Art*

1-6 credit(s) Every semester

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**PRT 551 - Hand Papermaking Workshop**
*School of Art*

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

Basic skills in hand papermaking in two- and 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*

3 credit(s) At least 1x fall or spring
Continued investigation in hand papermaking, simple bookbinding, and letterpress printing.

**PRT 650 - Printmaking Research Problems**  
*School of Art*  
1-12 credit(s) Every semester  
Designed by student and faculty to involve student in personal research program in printmaking technology (lithography, intaglio, papermaking, silk screen, and related areas). Permission of instructor  
Repeatable

**PRT 750 - Printmaking Research Problems**  
*School of Art*  
1-12 credit(s) Every semester  
Continuation of PRT 650.  
Repeatable

**PRT 996 - Final Presentation**  
*School of Art*  
3 credit(s) Every semester  
Final presentation accompanied by written statement, culminating in an oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

**PRT 997 - Master's Thesis**  
*School of Art*  
0-6 credit(s) Every semester  
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**SCU 507 - Sculpture Survey**  
*School of Art*  
1-9 credit(s) Every semester  
Modeling from life, casting, composition problems.  
PREREQ: SCU 207 AND 208

**SCU 508 - Sculpture Survey**  
*School of Art*  
1-9 credit(s) Every semester  
Modeling from life, casting, composition problems.  
PREREQ: SCU 207 AND 208

**SCU 591 - Wood and Mixed-Media Research**  
*School of Art and Design*  
3 credit(s) Every semester  
This course will focus on using wood and mixed media as art-making materials. Students will learn several woodworking techniques as well as the hand and power tools and machinery necessary to perform them.  
Repeatable 2 time(s), 9 credits maximum

**SCU 592 - Plastics Techniques Research**  
*School of Art*  
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*  
1-9 credit(s) Every semester  
Advanced research.  
PREREQ: SCU 295 AND 296

**SCU 600 - Selected Topics**  
*School of Art*
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

**SCU 660 - Sculpture, Research Problems**  
School of Art  
3 credit(s) Every semester

Professional problems in sculpture; advanced study in technique and theory. Development of a consistent body of work. Permission of instructor required.

**SCU 760 - Sculpture, Research Problems**  
School of Art  
1-12 credit(s) Every semester

Continuation of SCU 660.

Repeatable

**SCU 996 - Final Presentation**  
School of Art  
3 credit(s) Every semester

Final presentation accompanied by a written statement, culminating in oral examination for M.F.A. or M.I.D. degree. Taken during final semester upon advisor's approval.

**SCU 997 - Master's Thesis**  
School of Art  
0-6 credit(s) Every semester

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**Other Courses**

**STA 500 - Selected Topics**  
School of Art  
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

**ADD 540 - Offset Printing**  
School of Design  
3 credit(s) Irregularly

A basic course covering the theory and practice of preparing camera-ready art for printing plate-making, and printing by offset lithography.

PREREQ: CMD 281

**ADD 640 - Professional Practices/Ad Des**  
School of Design  
1-12 credit(s) Irregularly

Advanced development of advertising for print and broadcast media, in small groups. Includes market analysis, strategic planning, conceptualization, and preparation of comprehensive layouts and story boards for advertising campaigns.

**ADD 644 - TV Commercial Production**  
School of Design  
3 credit(s) At least 1x fall or spring

Double Numbered with: ADD 444

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 740 - Ad Design Research Problems**  
School of Design  
1-12 credit(s) Upon sufficient interest

Individual instruction in specialized areas of advertising design, based on professional practices in development of advertising campaigns for print and broadcast media.

PREREQ: ADD 640

**ADD 996 - Final Presentation**  
School of Design  
3 credit(s) Irregularly

Final presentation accompanied by written statement culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

**ADD 997 - Masters Thesis**  
School of Design  
0-6 credit(s) Irregularly

Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

**DES 561 - Furniture and Light Workshop**  
School of 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 Design  
3 credit(s) At least 1x fall or spring

Crosslisted with: ISD 654

Advance detailing and construction techniques, documentation, shop drawings, computer-aided construction methods for fabrication.

**DES 601 - Design Thinking and Strategies**  
School of Design  
3 credit(s) Only during the summer

Introduction to design thinking as primary mode of solving problems to arrive at creative and alternative solutions.

**DES 602 - Design Thinking & Ideas**  
School of Design  
3 credit(s) At least 1x fall or spring

Double Numbered with: DES 302

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 605 - Digital Design Techniques I**  
School of Design  
3 credit(s) Every semester

Double Numbered with: DES 305

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 606 - Digital Design Techniques II**  
School of Design  
3 credit(s) Every semester

Double Numbered with: DES 306

Introduces students to the two central practices of today's designers, creating vector illustrations and manipulating digital imagery. Using industry-standard design software, assignments provide practical experience for generating professional illustrations and image-based work. Additional work required of graduate students.
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**DES 607 - Digital Design Techniques III**  
*School of Design*  
3 credit(s) Every semester  
Double Numbered with: DES 307  
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 641 - Fabrication Skills and Methods**  
*School of Design*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: DES 341  
Introduction to wood and metal shop construction techniques for design fabrication. Additional work required of graduate students.

**DES 642 - Computer Generated Fabrication**  
*School of Design*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: DES 342  
Introduction to computer generation construction techniques for design fabrication. Additional work required of graduate students.

**DES 647 - Design Research**  
*School of Design*  
3 credit(s) At least 1x fall or spring  
Literature and information search into the design of interior environments and their functional relation to humanistic, sociocultural, and structural factors to determine thesis problem.

**DES 648 - Introduction to Design Communication**  
*School of Design*  
3 credit(s) Only during the summer  
Introduction to the processes and techniques of design communication and presentation including both computer generated and manual applications.

**DES 652 - Branding and Marketing Works**  
*School of Design*  
3 credit(s) At least 1x fall or spring  
Double Numbered with: DES 452  
Interdisciplinary design studio focused on branding and marketing. Additional work required of graduate students.

**DES 670 - Experience Credit**  
*School of 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

**DES 672 - Introductory Design Studio**  
*School of Design*  
3 credit(s) Only during the summer  
Introduction to design processes and the application of design thinking, language, and methods to introductory level projects.

**DES 748 - Design Communication**  
*School of Design*  
3 credit(s) At least 1x fall or spring  
Development of a design communication skills and techniques for the process of design research, analysis, and synthesis with solutions to the thesis problem.

**DES 771 - Analysis and Synthesis**  
*School of Design*  
3 credit(s) At least 1x fall or spring  
Organization and evaluation strategies used in the analysis and synthesis of research information and data for establishing definitive design parameters and criteria.  
PREREQ: DES 647

**DES 772 - Design Project**  
*School of Design*  
6 credit(s) At least 1x fall or spring  
Developing and completing a comprehensive design project, including essential illustrations, technical drawings, models, and prototypes.

**DES 996 - Final Presentation**  
*School of Design*  
6 credit(s) At least 1x fall or spring  
Final presentation accompanied by written statement, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor’s approval.  
PREREQ: DES 771, DES 772

**DES 997 - Masters Thesis**  
*School of Art and Design*  
6 credit(s) At least 1x fall or spring  
Formal master’s thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.  
PREREQ: DES 771 AND DES 772

**ENA 627 - Field Study in Clothing and Textiles: Design, Construction, and Distribution**  
*School of Design*  
0-6 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

**ENA 670 - Experience Credit**  
*School of Design*  
0-6 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

**ENA 690 - Independent Study**  
*School of 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

**ENA 897 - Graduate Project**  
*School of Design*  
0-6 credit(s) Every semester  
Project comparable to a master’s thesis in quality and quantity of work; applicable in lieu of thesis only if a substantial portion of the work cannot be presented in written form.

**ENA 997 - Masters Thesis**  
*School of Design*  
0-6 credit(s) Every semester  
Repeatable
FAS 526 - Cultural Aspects of Clothing  
School of Design  
3 credit(s) Irregularly  
Global cultures; how dress and adornment enhance understanding of these cultures.

FAS 530 - Problems in Environmental Arts  
School of Design  
3 credit(s) Irregularly  
Research in design, color, historic backgrounds applied to costume. Permission of Instructor.  
Repeatable

FSH 570 - Fashn Illustratn Res Prob  
School of Design  
3 credit(s) Upon sufficient interest  
Individual development in specialized areas of fashion illustration.  
PREREQ: FSH 471

IND 571 - Industrial Design: Product Practicum  
School of 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 477 AND 479

IND 572 - Industrial Design: Advanced Problems  
School of 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)

IND 573 - Industrial Design: Thesis Research  
School of 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 477 AND 479

IND 574 - Industrial Design: Thesis  
School of 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)

IND 577 - Industrial Design: Philosophy and Ethics  
School of 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 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.

IND 671 - Design Information Research  
School of Design  
1-12 credit(s) At least 1x fall or spring  
Acquisition of available information and academic resources as the basis for a design project or thesis.

IND 672 - Basic Data Research  
School of Design  
1-12 credit(s) At least 1x fall or spring  
Systematic investigations using conceptual and/or physical models.

IND 673 - Human Factors For Designers  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: IND 375

IND 676 - Digital Surface Modeling  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: IND 376

IND 679 - Industrial Design Interface  
School of Design  
3 credit(s) Every semester  
Double Numbered with: IND 479

IND 996 - Final Presentation  
School of Design  
3 credit(s) At least 1x fall or spring  
Final presentation accompanied by written statement, culminating in oral examination for M.I.D. degree. Taken during final semester upon advisor's approval.

IND 997 - Master's Thesis  
School of Design  
0-6 credit(s) At least 1x fall or spring  

ISD 553 - Interior Design: Philosophy and Research  
School of 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 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.

ISD 648 - Design Analysis  
School of Design  
1-12 credit(s) At least 1x fall or spring  
Examination and organization of material from the research phase with schematic interior design studies of the problem to set parameters.  
PREREQ: ISD 647

ISD 651 - Environmental Design Focus Studio  
School of Design  
3 credit(s) At least 1x 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.

**MUS 500 - Selected Topics**  
**School of 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 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 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 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

**MUS 600 - Selected Topics**  
**School of 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 601 - Museum Preparation & Installation**  
**School of Design**  
3 credit(s) Every semester  
Introduction to the basics of art and object handling, installation techniques, object preparation, passive conservation, mounting, framing, storage, shipping. New technologies and contemporary practices, including projection, lighting, and sound installations.

**MUS 602 - Museum Graphics & Communications**  
**School of Design**  
3 credit(s) Every semester  
Introduction to fundamentals of design and production of museum and exhibition graphics, promotional materials and communication strategies for exhibitions and the museum as a whole. All software is standard to current design industry practices.

**MUS 603 - Practicum I**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
Theory and practical application of procedures concerning the temporary exhibit. Registration, preparation and handling of works of art, environmental considerations, exhibition design and installation, packing and shipping art. Permission of instructor

**MUS 604 - Practicum II**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
Continuation of MUS 603. Students assume greater responsibility in all aspects of exhibition preparation and installation.  
PREREQ: MUS 603

**MUS 607 - Collections Management**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
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 670 - Experience Credit**  
**School of 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

**MUS 703 - Advanced Curatorship**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
Application of principles developed in MUS 506 to specific problems in exhibition planning and organization, publication preparation, and interpretation of individual works of art in their historical context.  
PREREQ: MUS 506

**MUS 704 - Museum/Gallery Internship**  
**School of Design**  
0 credit(s)  
Eight weeks or more of full-time work in an approved museum or gallery under close supervision of senior staff. Permission of department chair

**MUS 705 - Print Curatorship**  
**School of Design**  
3 credit(s) Upon sufficient interest  
Double Numbered with: MUS 405  
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 707 - Collections Management**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
Double Numbered with: MUS 407  
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 708 - Public Learning in Museums**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
Double Numbered with: MUS 408  
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 709 - Museum Management**  
**School of Design**  
3 credit(s) At least 1x fall or spring  
Double Numbered with: MUS 409  
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 712 - Museum Development  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: MUS 412  
Understanding philanthropy and the fundamentals of successful fundraising, articulating a case for support, building endorsement, capital campaigns, special events, planned giving, corporate and foundational support, practicing stewardship, the development profession. Additional work required of graduate students.

MUS 750 - Advanced Problems in Museum Studies  
School of Design  
1-6 credit(s)  
Individual projects of substantial complexity addressing specific problems in the field. Permission of instructor  
Repeatable 1 time(s), 6 credits maximum

MUS 896 - Graduate Research Project  
School of Design  
3 credit(s)  
Final presentation of research project accompanied by written statement and oral examination. Taken in final semester upon advisor's approval. Permission of chair

SPD 527 - Advanced Textile Printing  
School of Design  
3 credit(s)  
Individual research of advanced dyeing and printing methods.  
PREREQ: TXT 314

SPD 643 - Design Analysis & Synthesis I  
School of Design  
1-12 credit(s) At least 1x fall or spring  
Individual projects undertaken with instructor's consultation and guidance, directed toward professional decorative and repeat pattern design as related to the wall covering, textile, and allied industries. For first-year graduate surface pattern design majors.

SPD 743 - Design Analysis & Synthesis II  
School of Design  
1-12 credit(s) At least 1x fall or spring  
Research problems in surface pattern design for graduate majors. Individual projects undertaken with instructor's consultation and guidance. Research directed toward professional decorative and repeat pattern design as related to the wall covering, textile, and allied industries. For first-year graduate surface pattern design majors.

SPD 996 - Final Presentation  
School of Design  
3 credit(s) Every semester  
Written statement to accompany final project, culminating in oral examination for M.F.A. degree. Taken during final semester upon advisor's approval.

SPD 997 - Masters Thesis  
School of Design  
0-6 credit(s) Every semester  
Formal master's thesis. Written document exhibiting substantive and original research. Planned under direction of major departmental advisor.

TXT 537 - Advanced Computer-Aided Pattern Design  
School of 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

TXT 600 - Selected Topics  
School of 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 612 - Interior Furnishings  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: TXT 312  
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 614 - Textiles Handprinting  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: TXT 314  
Screen printing repetitive and engineered designs on fabric. Design process, color formulas, and screen preparation. Additional work required of graduate students.

TXT 616 - Computer-Aided Pattern Design  
School of Design  
3 credit(s) Every semester  
Double Numbered with: TXT 316  
Digital design for the development of decorative patterns. Motif manipulation, color selection, repeat techniques, and presentation methods. Additional work required of graduate students.

TXT 624 - Textiles Synthesis  
School of Design  
3 credit(s) Every semester  
Double Numbered with: TXT 324  
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 626 - Environmental Textiles  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: TXT 326  
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 627 - Textiles in Context  
School of Design  
3 credit(s) At least 1x fall or spring  
Double Numbered with: TXT 327  
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.  
Repeatable

TXT 690 - Independent Study  
School of 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

AMC 500 - 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

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 - Techoq 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 1x 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
Setnor School of Music
2 credit(s) At least 1x 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 1x 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

AMC 552 - Yoga and Contemplative Practices for Performers
Setnor School of Music
1 credit(s) At least 1x fall or spring
The objective of this class is to introduce basic yoga principles including postures and mindfulness practices that will enable more efficient practice strategies and more focused and authentic performances.
Repeatable 1 time(s), 2 credits maximum

AMC 799 - Capstone Project
Setnor School of Music
3 credit(s) At least 1x fall or spring
Final research project in the Master of Music degree programs if required by degree plan or selected through advisement.

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.

BSN 665 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

BSN 666 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

BSN 765 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

BSN 766 - Bassoon/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

BTB 556 - Tuba/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

BTB 655 - Tuba/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

BTB 656 - Tuba/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

BTB 755 - Tuba/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

BTB 756 - Tuba/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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.

CLR 645 - Clarinet/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

CLR 646 - Clarinet/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

CLR 745 - Clarinet/Music Major
Setnor School of Music
1-6 credit(s) Every semester
CLR 746 - Clarinet/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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) At least 1x fall or spring
PREREQ: CTG 545

CTG 548 - Intermediate Conducting, Instrumental
Setnor School of Music
2 credit(s) For graduate music students with emphasis in conducting.

CTG 615 - Applied Music, Conducting
Setnor School of Music
2 credit(s) For advanced students whose technical knowledge and musical scholarship is established.

CTG 640 - Advanced Conducting
Setnor School of Music
2 credit(s) For graduate music students with emphasis in conducting.

CTG 715 - Applied Music, Conducting
Setnor School of Music
2 credit(s) For performance majors.

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
1-6 credit(s) Every semester
For performance majors.

DBS 645 - Double Bass/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

DBS 646 - Double Bass/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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
Repeatable

ENC 560 - Chamber Music/Percussion
Setnor School of Music
0-1 credit(s) Every semester
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

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

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.

EUP 635 - Euphonium Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

EUP 636 - Euphonium Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

EUP 735 - Euphonium Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

EUP 736 - Euphonium Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

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 625 - French Horn Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

FHN 626 - French Horn Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

FHN 725 - French Horn Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

FHN 726 - French Horn Instruction  
Setnor School of Music  
1-6 credit(s) Every semester  
For performance majors.

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 525 - 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 560 - Classical Guitar Instruction  
Setnor School of Music  
1-4 credit(s) Every semester  
For non-music students.

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.

GTR 665 - Classical Guitar Instruction  
Setnor School of Music  
1-4 credit(s) Every semester  
For performance majors.

GTR 666 - Classical Guitar Instruction  
Setnor School of Music  
1-4 credit(s) Every semester
For performance majors.

GTR 671 - 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 665, MHL 671

GTR 672 - 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.
PREREQ: GTR 671
COREQ: GTR 666, MHL 672

GTR 765 - Classical Guitar Instruction
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

GTR 766 - Classical Guitar Instruction
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

GTR 771 - 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 765, MHL 771

GTR 772 - 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.
PREREQ: GTR 771
COREQ: GTR 766, MHL 772

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.

HPD 550 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.
Repeatable 1 time(s), 4 credits maximum

HPD 555 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

HPD 556 - Harp Instruction
Setnor School of Music
1-4 credit(s) Every semester
For music students.

HPD 655 - Harp Instruction
Setnor School of Music
1-6 credit(s) Every semester
For music majors.

HPD 656 - Harp Instruction
Setnor School of Music
1-6 credit(s) Every semester
For music majors.

HPD 755 - Harp Instruction
Setnor School of Music
1-6 credit(s) Every semester
For music majors.

HPD 756 - Harp Instruction
Setnor School of Music
1-6 credit(s) Every semester
For music majors.

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: 1650 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: 1850 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 1x 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 1x 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 grade to a group of three faculty, one of whom is the advisor.
Repeatable

MHL 664 - History of American Popular Music
Setnor School of Music
3 credit(s) At least 1x fall or spring
Double Numbered with: MHL 364
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 671 - Weekly Student Convocation Graduate
Setnor School of Music
0 credit(s) At least 1x fall or spring
Repeatable 1 time(s)

MHL 672 - Weekly Student Convocation Graduate
Setnor School of Music
0 credit(s) At least 1x fall or spring
Repeatable 1 time(s)

MHL 772 - Weekly Student Convocation Graduate
Setnor School of Music
0 credit(s) At least 1x fall or spring
Repeatable 1 time(s)

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
3 credit(s) Upon sufficient interest
Grounding in species counterpoint and 16th-century practice, moving into a comprehensive study of contrapuntal techniques through the 20th century.
PREREQ: MTC 246

MTC 545 - Counterpoint
Setnor School of Music
3 credit(s) Upon sufficient interest
Twentieth-century compositional methods, analysis of selected works. Introduction to 12-tone set theory.
PREREQ: MTC 246

MTC 546 - Analysis of Contemporary Music
Setnor School of Music
3 credit(s) At least 1x 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 549 - Survey of Basic Theory
Setnor School of Music
3 credit(s) Even Academic Yr e.g. 2004-5
Double Numbered with: MTL 349
Survey of predominantly western sacred choral literature from the Renaissance to the present. Open to all graduate students.

MTC 550 - 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 551 - Songwriting
Setnor School of Music
1-2 credit(s) Every semester
For students not majoring in composition. Permission of instructor

MTC 555 - Composition
Setnor School of Music
1-2 credit(s) Every semester
For students not majoring in composition. Permission of instructor
3 credit(s) At least 1x 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. 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 lydian 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.

MTC 600 - Advanced Orchestration
Setnor School of Music
3 credit(s) At least 1x fall or spring
Contemporary techniques. Innovative forms of instrumentation and nonstandard use of instruments.
PREREQ: MTC 535, 536

MTC 625 - Evolution of Harmony
Setnor School of Music
3 credit(s) Irregularly
Origins and development of harmony from organum to music of the present.

MTC 626 - Evolution of Form
Setnor School of Music
3 credit(s) Irregularly
Origins and development of musical forms from the period of Gregorian chants to present.

MTC 635 - Advanced Orchestration
Setnor School of Music
3 credit(s) At least 1x fall or spring
Contemporary techniques. Innovative forms of instrumentation and nonstandard use of instruments.

MTC 660 - Independent Study
Setnor School of Music
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.

Repeateable

MTC 746 - Advanced Topics in Music Theory
Setnor School of Music
3 credit(s) Upon sufficient interest
Intensive study and class discussion of contemporary writings in music theory. Students deliver an oral presentation on important periodical articles and complete a major analysis project.

PREREQ: MTC 645

MTC 751 - Composition Seminar, Graduate
Setnor School of Music
0 credit(s) Every semester
Listening and discussion of creative issues and strategies in music composition. Two to four presentations by visiting composers per semester. Required of all graduate composition majors.

MTC 752 - Composition Seminar, Graduate
Setnor School of Music
0 credit(s) Every semester
Listening and discussion of creative issues and strategies in music composition. Two to four presentations by visiting composers per semester. Required of all graduate composition majors.

MTC 755 - Composition
Setnor School of Music
1-2 credit(s) Every semester
Continuation of MTC 655,656.

MTC 756 - Composition
Setnor School of Music
1-2 credit(s) Every semester
Continuation of MTC 655,656.

MTC 997 - Thesis in Music Theory
Setnor School of Music
0-3 credit(s) Upon sufficient interest
Repeatable

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.

MUE 525 - Advanced Topics in Music Theory
Setnor School of Music
3 credit(s) Upon sufficient interest
Intensive study and class discussion of contemporary writings in music theory. Students deliver an oral presentation on important periodical articles and complete a major analysis project.

MUE 556 - Composition
Setnor School of Music
1-2 credit(s) Every semester
Continuation of MTC 655,656.

MUE 557 - Composition Seminar, Graduate
Setnor School of Music
0 credit(s) Every semester
Listening and discussion of creative issues and strategies in music composition. Two to four presentations by visiting composers per semester. Required of all graduate composition majors.

MUE 558 - Composition Seminar, Graduate
Setnor School of Music
0 credit(s) Every semester
Listening and discussion of creative issues and strategies in music composition. Two to four presentations by visiting composers per semester. Required of all graduate composition majors.

MUE 560 - World Music and the Interdisciplinary Curriculum
Setnor School of Music
3 credit(s) Only during the summer
Crosslisted with: EDU 604
Examination of historical and social perspectives of world music in diverse cultural contexts. Strategies for teachers to develop and facilitate interdisciplinary curricula through examination of materials and resources featuring music from around the world.

MUE 604 - World Music and the Interdisciplinary Curriculum
Setnor School of Music
3 credit(s) Irregularly
Crosslisted with: EDU 604
Examination of historical and social perspectives of world music in diverse cultural contexts. Strategies for teachers to develop and facilitate interdisciplinary curricula through examination of materials and resources featuring music from around the world.

MUE 610 - Field Experience in Music Education
Setnor School of Music
1-2 credit(s) Every semester
Double Numbered with: MUE 310
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.

Repeatable 1 time(s), 2 credits maximum

MUE 611 - Assessment in Music Education
Setnor School of Music
1 credit(s) At least 1x fall or spring
Crosslisted with: EDU 611
Examines a diverse selection of assessment methods for student learning within music education settings. Strategies for future instruction planning; instructional adaptations based on data gathered through teacher-created assessment tools.

MUE 614 - General Music in the Inclusive Classroom
Setnor School of Music
3 credit(s)

MUE 615 - Introduction to Research in Music
Setnor School of Music
3 credit(s) At least 1x fall or spring
Methods and techniques. Literature and research studies. Bibliographical materials and application of appropriate writing styles. Open to all music majors; nonmusic majors may elect with permission of instructor.

MUE 616 - Psychological and Sociological Aspects of Music
Setnor School of Music
3 credit(s) Irregularly
Introduction to acoustics, the ear and hearing, musical systems, and psychosociophysiological processes involved in musical behavior. Open to all music majors; non-music majors with permission of instructor.

MUE 617 - Jazz Ensemble Techniques
Setnor School of Music
2 credit(s)
Double Numbered with: MUE 415

MUE 618 - Current Problems in Music Education
Setnor School of Music
3 credit(s) At least 1x fall or spring
Major topics and problems. Current trends. Open to all music majors; nonmusic majors may elect with permission of instructor.

MUE 621 - Teaching of Voice for Schools
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 321
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 623 - Teaching of Percussion Instruments
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 423
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 625 - Teaching of String Instruments
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 325
Laboratory in string 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 626 - Teaching of Brass Instruments
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 326
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 627 - Teaching of Woodwind Instruments I
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 327
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 628 - Teaching of Woodwind Instruments II
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 328
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 633 - Music in the Elementary School
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 333
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.

MUE 634 - Methods and Materials in General Music
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 334
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 670 - Experience Credit
Setnor School of Music
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.

MUE 690 - Independent Study
Setnor School of Music
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

MUE 700 - 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.

MUE 711 - Advanced Choral Teaching
Setnor School of Music
3 credit(s) Upon sufficient interest
Problems of choral training and organization relevant to school groups. Choral literature in terms of teaching. Open to all music majors; nonmusic majors may elect with permission of instructor.

MUE 712 - Advanced Instrumental Teaching
Setnor School of Music
3 credit(s) Upon sufficient interest
Problems of instrumental training and organization relevant to bands and orchestras in schools.

MUE 715 - Administration and Supervision in Music Education
Setnor School of Music
3 credit(s) Irregularly
Aims and procedures in administration and supervision of school music programs. Scheduling, Evaluation and improvement of instruction. Budgets. Public relations. Research problems in planning and executing a modern program.

MUE 716 - Curriculum Development in Music
Setnor School of Music
3 credit(s) Irregularly
Instructional design in teaching music. Systematic processes in curriculum and course design, use and evaluation of objectives, selection and construction of instructional materials, and methods of curriculum evaluation. Open to all music majors; nonmusic majors may elect with permission of instructor.

MUE 731 - Mngmt in Music Teaching
Setnor School of Music
1-2 credit(s) At least 1x fall or spring
Double Numbered with: MUE 431

MUE 735 - Choral Rehearsal Techniques
Setnor School of Music
2-3 credit(s) At least 1x fall or spring
Double Numbered with: MUE 435
Principles and techniques of conducting and rehearsing choral groups. Music literature for typical choral group in schools.

MUE 737 - Instrumental Rehearsal Techniques in Music Education
Setnor School of Music
2-3 credit(s) At least 1x fall or spring
Double Numbered with: MUE 437
Principles and techniques of conducting and rehearsing instrumental groups. Music literature for typical instrumental groups in schools.

MUE 770 - Experience Credit
Setnor School of Music
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.
MUE 970 - Experience Credit
Setnor School of Music
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.

MUE 990 - Independent Study
Setnor School of Music
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.

MUE 997 - Master Thesis
Setnor School of Music
1-6 credit(s) Every semester

MUI 610 - Soysars Leadership Lecture Series
Setnor School of Music
1 credit(s)
Double Numbered with: MUI 310
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.
Repealable 7 time(s), 8 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.

OBO 635 - Oboe Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

OBO 636 - Oboe Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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.

ORG 615 - Organ Instruction
Setnor School of Music
1-6 credit(s) Every semester
For Performance majors.

ORG 616 - Organ Instruction
Setnor School of Music
1-6 credit(s) Every semester
For Performance majors.

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 Voco 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.

PDG 625 - Pedagogy of Theory
Setnor School of Music
3 credit(s) At least 1x fall or spring

PER 994 - Graduate Recital I
Setnor School of Music
0-1 credit(s) Every semester
Solo recital required of all matriculated students in M.Mus. program with performance major.
PER 995 - Graduate Recital II
Setnor School of Music
0-1 credit(s) Every semester
Ensemble recital or second solo recital, depending upon which is most appropriate to student's major area of specialization. Matriculated students in M. Mus. program.

PER 996 - Lecture Recital
Setnor School of Music
0-1 credit(s) Every semester
Lecture demonstration recital on topic appropriate to the candidate's major area of specialization.

Piano

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.

PNO 600 - 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

PNO 625 - Piano Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

PNO 626 - Piano Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

PNO 725 - Piano Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

PNO 726 - Piano Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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.

PRC 615 - Percussion Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

PRC 616 - Percussion Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

PRC 715 - Percussion Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

PRC 716 - Percussion Instruction
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

RAE 500 - 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

RAE 501 - Reconciling Arts and Commerce: Arts Entrepreneurship
Setnor School of Music
3 credit(s) At least 1x 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 1x 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

RAE 600 - 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 601 - Audio Arts Graduate Survey
Setnor School of Music
3 credit(s) Only during the summer
Foundational widescreen view of the business of audio and music in entertainment media. Creative processes, industry careers, revenue streams, and studio theory will be introduced.

RAE 610 - Audio Arts Colloquium
Setnor School of Music
1 credit(s) Every semester
A three-phase course taught in one-credit increments designed to give Audio Arts students a grounding in the fields of culture of audio arts and music-related media.
Repeatable 2 time(s), 3 credits maximum

RAE 675 - Audio Arts Industry Practicum
Setnor School of Music
3 credit(s) Only during the summer
Students work in a professional audio arts setting for a minimum of six weeks, while participating in online discussions and doing a research paper on the industry.

RAE 690 - Independent Study
Setnor School of Music
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

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 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
For music students.

SXP 556 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For music students.

SXP 655 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

SXP 656 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

SXP 755 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

SXP 756 - Saxophone/Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

TRB 540 - Trombone/Non Music Majors
Setnor School of Music
1-4 credit(s) Every semester
For non-music students.

TRB 545 - Trombone/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

TRB 546 - Trombone/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

TRB 645 - Trombone/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

TRB 745 - Trombone/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

TRB 746 - Trombone/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For performance majors.

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.

TRP 615 - Trumpet/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

TRP 616 - Trumpet/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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.

VCO 635 - Cello/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VCO 636 - Violoncello/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VCO 735 - Cello/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VCO 736 - Cello/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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.

VLA 625 - Viola/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VLA 626 - Viola/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VLAN 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

VLAN 515 - Violin/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For music students.

VLAN 516 - Violin/Music Major
Setnor School of Music
1-4 credit(s) Every semester
For music students.

VLAN 615 - Violin/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VLAN 616 - Violin/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VLC 715 - Violin/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VLC 716 - Violin/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

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

VOC 615 - Voice/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VOC 616 - Voice/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VOC 625 - Grad Voc Prfrmnc Sem I
Setnor School of Music
1 credit(s) Irregularly
Weekly seminar in studio and department-wide sessions on those aspects of being a professional singer not covered in normal coursework or lessons.
Repeatable 3 time(s), 4 credits maximum

VOC 627 - Grad Voc Prfrmnc Sem III
Setnor School of Music
1 credit(s) Irregularly
Weekly seminar in studio and department-wide sessions on those aspects of being a professional singer not covered in normal coursework or lessons.

VOC 628 - Grad Voc Prfrmnc Sem IV
Setnor School of Music
1 credit(s) Irregularly
Weekly seminar in studio and department-wide sessions on those aspects of being a professional singer not covered in normal coursework or lessons.

VOC 715 - Voice/Music Major
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.

VOC 716 - Voice/Music Majors
Setnor School of Music
1-6 credit(s) Every semester
For performance majors.
University College

Bethaida Gonzalez, Dean
700 University Ave.
parttime@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 full-time undergraduates. Click here for a complete listing of all degree programs available to part-time 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.

Minors

Undergraduate minors in Creative Leadership or Knowledge Management are offered to enhance a student's degree by preparing students for the demands of the current workplace and job market.

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.

Minimum Requirements for Minors

At least 18 credits of coursework is required for the B.P.S. minors. At least 12 credits must be in 300-400 level courses. The minors are open to Syracuse University undergraduate students in good standing with the approval of their home college. Not available for students in The Martin J. Whitman School of Management. Students must enter the program no later than first semester of junior year and have a 3.0 GPA (based on completion of 30 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.
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
- Long - Classes that meet equal to or more than 5 days
- 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 315-443-5000 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-week Legal English course supports students accepted for the LL.M. (Master of Laws). In addition, the ELI offers a four-week general English course in the summer, as well 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 315-443-8571 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 student-veteran 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 O. Eve HEOp

The Arthur O. 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.

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 classes taken at Syracuse University.

See the current issue of Academic Rules for a complete statement of University policies and requirements.

Programs

Major
- Creative Leadership, BPS
- Knowledge Management, BPS
- Liberal Arts, AA
- Liberal Studies, BA

Certificate
- Creative Leadership Certificate
- Knowledge Management Certificate

Minor
- Creative Leadership Minor
- Knowledge Management Minor

Contact:

Academic Director:
Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-443-5890, adjensen@syr.edu

Administrative Director:
Eileen M. Julian, Senior Program Administrator, University College, 315-443-1317, emjulian@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 credit)

Complete Language Skills Sequence Requirement outlined in the Liberal Arts Core Guidebook.

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

(Mandatory for both programs of study.)

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 345 - 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
- BPS 335 - Conflict in Business and Management for Professional Studies

Business Processes: (Choose 6 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)

- ANT 424 - Negotiation: Theory and Practice
- BPS 335 - Conflict in Business and Management for Professional Studies
- BPS 382 - Leading Cooperative Negotiations
- CRS 313 - Nonverbal Communication
- CRS 335 - Leadership/Stewardship Communication
- CRS 338 - Communication in Organizations
- CRS 426 - Persuasion
- CRS 430 - Intercultural Communication
- IST 444 - Information Reporting and Presentation
- PAF 420 - Interpersonal Conflict Resolution Skills
- PAF 421 - Mediation:Theory and Practice
- PAF 424 - Conflict Resolution in Groups

Creativity/Design - Thinking (Choose 9 credits)

- BPS 325 - Creative and Design Thinking for Professional Studies
- 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
- MGT 462 - Leadership and Organization Change

Relationship/Workforce Management (Choose 6 credits)

- HTW 405 - Cognitive Behavioral Approaches to Stress Reduction
- LGL 403 - Business Organizations
- SOC 466 - Organizations and Society
- PHI 197 - Human Nature

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, 315-443-5890, adjensen@syr.edu

Administrative Director:
Eileen M. Julian, Senior Program Administrator, University College, 315-443-1317, emjulian@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-to-face 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 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
(Mandatory for both programs of study.)

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
- 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: Knowledge Management (30 credits)

Introduction (Required)
- KNM 301 - Introduction to Knowledge Management

Data Science (Choose 6 credits)
- GET 236 - Enterprise Data Analysis: Tools and Techniques
- GET 336 - Advanced Enterprise Data Analysis: Tools and Techniques

Organizational Systems
- IST 352 - Information Analysis of Organizational Systems
- IST 359 - Introduction to Database Management Systems
- ECN 301 - Intermediate Microeconomics
- MAS 362 - Decision Tools for Management
- PHI 251 - Logic
- SWK 361 - Foundations of Social Work Research

Knowledge Management (Choose 9 credits)
- ECS 203 - Introduction to Technology
- HTW 306 - Public Health Administrative Systems
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.

Minor
Creative Leadership Minor

Contact:

Academic Director:
Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-443-5890, adjensen@syr.edu

Administrative Director:
Eileen M. Julian, Senior Program Administrator, University College, 315-443-1317, emjulian@syr.edu

Faculty:
Faculty from schools/colleges across campus, in addition to Michael Evans and Susan Conklin (part-time instructors).

Description:
The Creative Leadership minor is an interdisciplinary minor that gives students the opportunity to study creativity, leadership, communication and problem-solving issues. This minor contributes to creating future professionals with a breadth of interpersonal skills necessary to collaborate across industries. This minor requires completion of 18 credits.

Admission:
3.0 GPA (based on completion of 30 credits).
Must enter program no later than first semester of junior year.
To be admitted to the program, students must submit a Declaration of Minor form to their academic advisor, the Bachelor of Professional Studies Academic Director and their home college Dean’s office.

Declaration of Minor forms accepted anytime.
The minor 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.

Requirements
Courses (required and elective): 18 credits
Required courses (6 credits):
• CRL 301 - Introduction to Creative Leadership
• BPS 325 - Creative and Design Thinking for Professional Studies

Choose 4 classes (12 credits) from below:
• BPS 382 - Leading Cooperative Negotiations
• BPS 415 - Digital and Business Communications for Professional Studies
• CRL 311 - Professional Issues in Creative Leadership
• CRS 435 - Interviewing
• EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
• OGL 342 - Customer Relations Leadership
• OGL 472 - Organizational Leadership

Knowledge Management Minor

Contact:

Academic Director:
Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-443-5890, adjensen@syr.edu

Administrative Director:
Eileen M. Julian, Senior Program Administrator, University College, 315-443-1317, emjulian@syr.edu

Faculty:
Faculty from schools/colleges across campus, in addition to Richard Garza (part-time instructors).

Description:
The Knowledge Management minor is an interdisciplinary minor that gives students exposure and the opportunity to study knowledge management, communication, and problem-solve information issues. This minor contributes to creating future professionals with a breadth of interpersonal skills necessary to collaborate across industries. This minor requires completion of 18 credits.

Admission:
3.0 GPA (based on completion of 30 credits).
Must enter program no later than first semester of junior year.
To be admitted to the program, students must submit a Declaration of Minor form to their academic advisor, the Bachelor of Professional Studies Academic Director and their home college Dean’s office.
Declarative minor forms accepted anytime.

Requirements

Courses (required and elective): 18 credits

Required (6 credits):
- KMN 301 - Introduction to Knowledge Management
- KMN 401 - Professional Issues in Knowledge Management

Choose 4 classes (12 credits) from below:
- BPS 325 - Creative and Design Thinking for Professional Studies
- BPS 382 - Leading Cooperative Negotiations
- BPS 415 - Digital and Business Communications for Professional Studies
- CRS 430 - Intercultural Communication
- IDE 456 - Computers as Critical Thinking Tools
- OGL 472 - Organizational Leadership
- PHI 251 - Logic

The minor is administered by the 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.

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:
Eileen Julian, Senior Program Administrator, University College, 315-443-1317, emjulian@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:
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 or
- IST 444 - Information Reporting and Presentation
- BPS 325 - Creative and Design Thinking for Professional Studies
- IDS 401 - What’s the Big Idea?: Technology Innovation or
- EEE 370 - Introduction to Entrepreneurship and Emerging Enterprises
- EEE 378 - Imagination, Entrepreneurship and Creative Problem Solving
- BPS 335 - Conflict in Business and Management for Professional Studies or
- CRS 426 - Persuasion or
- PAF 424 - Conflict Resolution in Groups
- CRL 311 - Professional Issues in Creative Leadership or
- OGL 472 - Organizational Leadership or
- MGT 462 - Leadership and Organization Change

Other:
GPA 2.0 minimum

Certificate in Creative Leadership

Total Credits: 15

Note:
The certificate is administered by the 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.

Knowledge Management Certificate

Contact:

Academic Director:
Arthur Jensen, Senior Associate Dean/Professor, College of Visual and Performing Arts, 315-443-5890, adjensen@syr.edu

Administrative Director:
Eileen M. Julian, Senior Program Administrator, University College, 315-443-1317, emjulian@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-to-face 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:
- KMN 301 - Introduction to Knowledge Management
- IST 352 - Information Analysis of Organizational Systems or
- ECS 203 - Introduction to Technology or
- PHI 251 - Logic or
- SWK 361 - Foundations of Social Work Research
- IDE 456 - Computers as Critical Thinking Tools
- WRT 302 - Advanced Writing Studio: Digital Writing or
- BPS 415 - Digital and Business Communications for Professional Studies
- CRS 430 - Intercultural Communication
- KMN 401 - Professional Issues in Knowledge Management

Degree
Certificate in Knowledge Management

Total Credits: 15

Note:
The certificate is administered by the 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.
## Courses

### Bachelor of Professional Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>University College</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BPS 100 - Selected Topics</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 101 - Introduction to Science, Technology, and Society</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>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.</td>
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<tr>
<td><strong>BPS 200 - Selected Topics</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 211 - Introduction to Professional Studies</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>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.</td>
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<tr>
<td><strong>BPS 270 - Experience Credit</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 290 - Independent Study</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 300 - Selected Topics</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 315 - Practical Financial Management for the Working Professional</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>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.</td>
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<tr>
<td><strong>BPS 325 - Creative and Design Thinking for Professional Studies</strong></td>
<td>University College</td>
<td>3 credit(s) Only during the summer</td>
<td>Exploration of accelerating changes in technology and organizational ecosystems over next decade as it influences professional career strategies. Students challenged to “think in new boxes” as they apply global, business and personal foresight.</td>
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<tr>
<td><strong>BPS 335 - Conflict in Business and Management for Professional Studies</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>Overview of key theoretical concepts and skills for managers and future managers. Students will explore various approaches for managing internal and external conflict to include mediation and negotiation. Focus on organizational dynamics.</td>
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<tr>
<td><strong>BPS 382 - Leading Cooperative Negotiations</strong></td>
<td>University College</td>
<td>3 credit(s) Irregularly</td>
<td>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.</td>
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<tr>
<td><strong>BPS 390 - Independent Study</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 411 - Senior Seminar</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>Bachelor of professional studies (B.P.S.) curriculum summary and strategic future decision-making. 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.</td>
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<tr>
<td><strong>BPS 415 - Digital and Business Communications for Professional Studies</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>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.</td>
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<tr>
<td><strong>BPS 470 - Experience Credit</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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<tr>
<td><strong>BPS 490 - Independent Study</strong></td>
<td>University College</td>
<td>1-6 credit(s) Irregularly</td>
<td>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</td>
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</tbody>
</table>

### Creative Leadership

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>CRL 301 - Introduction to Creative Leadership</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>Introduction to concepts of creative leadership. Principles related to foundational competencies of creative problem-solving; divergent thinking; gathering and using data to make informed decisions; and strategic and visionary thinking.</td>
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</tr>
<tr>
<td><strong>CRL 311 - Professional Issues in Creative Leadership</strong></td>
<td>University College</td>
<td>3 credit(s) At least 1x fall or spring</td>
<td>Emphasizes leadership in the 21st century that requires creative skills to seek opportunity, anticipate the unexpected, redefinition of excellence, innovative practices, and skills to build and share momentum in multi-generational teams.</td>
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</tbody>
</table>
Knowledge Management

**KNM 301 - Introduction to Knowledge Management**
*University College*
3 credit(s) At least 1x 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 1x 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.
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 offers graduate study in the following areas:

ESF Graduate Programs

Bachelor of Landscape Architecture (B.L.A.)
Landscape Architecture (HEGIS Code 0204)

Bachelor of Science (B.S.)
Aquaduct and Fisheries Science (HEGIS Code 0115)
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 0920) 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 sciences, 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 Architecture/Master of Science
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.

ESF Graduate Programs

The College offers graduate study in the following areas:

Advanced (Graduate) Certificates
Environmental Decision Making (HEGIS Code 0420) for Syracuse University students only.
Advanced Engineering Tools (HEGIS Code 0999)
Bioprocessing (HEGIS Code 0199)

Master of Forestry (M.F.)
Forest Management and Operations (HEGIS Code 0115)

Master of Landscape Architecture (M.L.A.)
Landscape Architecture (HEGIS Code 0204) with areas of study in community design and planning, cultural landscape studies and conservation, or landscape and urban ecology.

Master of Professional Studies (M.PS.)
Environmental and Forest Biology (HEGIS Code 0499) with areas of study in applied ecology, chemical ecology, conservation biology, ecology, entomology, environmental interpretation, environmental physiology, fish and wildlife biology and management, forest pathology and mycology, plant biotechnology, or plant science and biotechnology.
Code 1905) with areas of study in biochemistry, environmental chemistry, organic chemistry of natural products, or polymer chemistry.

Environmental and Resource Engineering (HEGIS Code 0999) with areas of study in environmental management, environmental resources engineering, or geospatial information science and engineering.

Environmental Science (HEGIS Code 0420) with areas of study in biophysical and ecological sciences, coupled natural and human systems, ecosystem restoration, environmental and community land planning, environmental communication and participatory processes, environmental monitoring and modeling, environmental policy and democratic processes, or water and wetland resource studies.

Environmental Studies (HEGIS Code 0201) with options in biological science applications; environmental policy, planning and law; or environmental communication, culture and writing.

Forest Resources Management (HEGIS Code 0115) with areas of study in ecology and ecosystems; economics, governance and human dimensions; management; or monitoring, analysis and modeling.

Paper and Bioprocess Engineering (HEGIS Code 0999) with areas of study in bioprocess engineering, biomaterials engineering, or paper science and engineering.

Sustainable Construction Management Engineering and Wood Science (HEGIS Code 0999) with areas of study in construction management, sustainable construction and wood science.

Master of Science (M.S.)

Environmental and Forest Biology (HEGIS Code 0499) with areas of study in chemical ecology, conservation biology, ecology, entomology, environmental interpretation, environmental physiology, fish and wildlife biology and management, forest pathology and mycology, or plant science and biotechnology.

Environmental and Forest Chemistry (HEGIS Code 1905) with areas of study in biochemistry, environmental chemistry, organic chemistry of natural products, or polymer chemistry.

Environmental and Resource Engineering (HEGIS Code 0999) with an option in forest engineering and areas of study in ecological engineering, environmental resources engineering, geospatial information science and engineering, or water resources engineering.

Environmental Science (HEGIS Code 0420) with areas of study in biophysical and ecological economics, coupled natural and human systems, ecosystem restoration, environmental and community land planning, environmental communication and participatory processes, environmental monitoring and modeling, environmental policy and democratic processes, or water and wetland resource studies.

Environmental Studies (HEGIS Code 0201) with areas of study in ecology and ecosystems; economics, governance and human dimensions; management; monitoring, analysis and modeling.

Landscape Architecture (HEGIS Code 0204) with areas of study in community design and planning, cultural landscape studies and conservation, or landscape and urban ecology.

Paper and Bioprocess Engineering (HEGIS Code 0999) with areas of study in bioprocess engineering, biomaterials engineering, or paper science and engineering.

Sustainable Construction Management and Wood Science (HEGIS Code 0999) with areas of study in construction management, sustainable construction and wood science.

Doctor of Philosophy (Ph.D.)

Environmental and Natural Resources Policy (HEGIS Codes 0420 and 0115)

Environmental and Forest Biology (HEGIS Code 0499) with areas of study in chemical ecology, conservation biology, ecology, entomology, environmental interpretation, environmental physiology, fish and wildlife biology and management, forest pathology and mycology, or plant science and biotechnology.

Environmental and Forest Chemistry (HEGIS Code 1905) with areas of study in biochemistry, environmental chemistry, organic chemistry of natural products, or polymer chemistry.

Environmental and Resource Engineering (HEGIS Code 0999) with areas of study in ecological engineering, environmental resources engineering, geospatial information science and engineering, or water resources engineering.

Environmental Science (HEGIS Code 0420) with areas of study in biophysical and ecological economics, coupled natural and human systems, ecosystem restoration, environmental and community land planning, environmental communication and participatory processes, environmental monitoring and modeling, environmental and natural resources policy or water and wetland resource studies.

Forest Resources Management (HEGIS Code 0115) with areas of study in forest ecosystem science and applications, natural resources management, quantitative methods in ecology and ecosystems; economics, governance and human dimensions; management; or monitoring, analysis and modeling.

Paper and Bioprocess Engineering (HEGIS Code 0999) with areas of study in bioprocess engineering, biomaterials engineering and paper science and engineering.

Sustainable Construction Management and Wood Science (HEGIS Code 0999) with areas of study in construction management, sustainable construction and wood science.

Minors

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 chemical 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; CME 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)
- CME 342 - Light Construction
- CME 343 - Construction Estimating
- CME 453 - Construction Planning and Scheduling
- CME 454 - Construction Project Management

Two additional courses chosen from the following (3 credits each)
- CME 330 - Building Codes of New York State
- 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

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: 21

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 - Natural Resources Managerial Economics
- FOR 360 - Principles of Management
- FOR 465 - Natural Resources Policy
- FOR 489 - Natural Resources Law & Policy

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 the 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 Equipment Troubleshooting & Maintenance (3);
- PSE 465 Fiber & Papermaking Properties (3);
- PSE 466 Paper Pigment & Barrier Coatings (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 nature-based 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 312 - Introduction to Personal Environmental Interpretation Methods
- FOR 372 - Fundamentals of Outdoor Recreation
- FOR 475 - Recreation Behavior and 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
- SRE 325 - Energy Systems
- SRE 335 - Renewable Energy Systems (EFB 120 is a pre-req)
- SRE 422 - Energy Markets and Regulation
- SRE 450 - Renewable Energy Capstone Planning
- ESC 460 - Renewable Energy Capstone Seminar

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 Take-Off (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